

COSMETIC AND TOILETRY FORMULATIONS

Second Edition

Volume 8

by

Ernest W. Flick



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In memory of my wife, Ruth

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Section I

Antiperspirants and Deodorants

Anti-Perspirant Roll-On

Slightly cloudy, high viscosity

Ingredients:

	<u>Wt%</u>
A: Wacker-Belsil DMC 6032	2.00
Water	52.00
B: Ethanol Alcohol (Cosmetic grade)	25.00
C: Locron L	20.00
Tylose H 4000 P	0.5-1.0
Pigments, fragrances	q.s.

Mix A, stir B into A, mix in C. The desired viscosity can be regulated with Tylose H 4000 P (add Tylose H 4000 P either mixed with water to A or mix at the end in the finished formulation).
Formulation 516 AH

Anti-Perspirant Stick

Firm slightly yellow stick with little rub

Ingredients:

	<u>Wt%</u>
A: Lanolin Acid	45.00
Wacker-Belsil SDM 6022	30.00
Locron P	15.00
Wacker-Belsil DM 350	5.00
B: Wacker-Belsil CM 040	5.00

Melt A, mix in B and fill while hot.
Temperature stability: at 45C over 10 weeks.
Formulation 358 AH

SOURCE: Wacker Silicones: Suggested Formulations

Antiperspirant Solid

A typical antiperspirant stick formulation. SF1202 acts as a fugitive carrier for the antiperspirant active, thus providing a dry, non-greasy feel. In antiperspirant solid or stick products, SF1202 is the preferred cyclomethicone providing a stable colloidal matrix of wax for stick integrity and strength. SF96 (100) provides anti-whitening properties.

<u>Ingredient:</u>	<u>Wt%</u>
Cyclomethicone (SF1202)	45.0
Dimethicone [(SF96)(100)]	5.0
Stearyl Alcohol	19.0
Hydrogenated Castor Oil (mp 70C)	3.0
Talc	4.0
Glyceryl Stearate and PEG-100 Stearate	2.0
Aluminum Zirconium Tetrachlorohydrate Gly (ZAG)	22.0

Procedure:

1. Mix together cyclomethicone, dimethicone and stearyl alcohol.
2. Add ZAG, talc and glyceryl stearate & PEG-100 stearate.
3. Heat to 75C and stir with moderate agitation until all wax is melted.
4. Pre-melt hydrogenated castor oil and add to mixture as a liquid and stir for 15 minutes.
5. Cool mixture to 55C with continued mixing and pour into container. Cool (avoid air entrapment due to excessive mixing speeds.)

Formula AP 100

Antiperspirant Gel

A simple emulsion demonstrating the use of SF1328 as a water-in-oil emulsifier. Cyclomethicone is the external phase to provide a dry, non-greasy feel and to reduce tack. The product is an opaque gel but can be clarified by matching the refractive index of Part A and Part B. This is often done by adding propylene glycol to Part B. Formulation AP104 illustrates transparent gel formulation.

<u>Materials:</u>	<u>Wt%</u>
Part A:	
Cyclomethicone (and) Dimethicone Copolyol (SF1328)	10.00
Cyclomethicone (SF1204)	14.00
Part B:	
Polysorbate-80	0.25
Aluminum Zirconium Tetrachlorohydrate Gly (ZAG)	20.00
Water	55.75

Procedure:

1. Mix together Part A ingredients.
2. Dissolve polysorbate-80 into warm water.
3. Add ZAG to the water and polysorbate-80 solution and mix to form Part B.
4. Slowly add Part B to Part A with high shear mixing.
5. Homogenize with a high speed and high shear mixer such as an Eppenbach mixer.

Formula AP102

SOURCE: GE Silicones: Formulary: Formula AP100 & AP102

Antiperspirant Stick
Firm stick with soft rub

<u>Ingredients:</u>	<u>Wt%</u>
A Wacker-Belsil SDM 6022/Stearoxy Dimethicone, Dimethicone	6.00
Adol 66/Isostearyl Alcohol	13.50
Brij 78/Steareth-20	2.50
Lanette O/Cetearyl Alcohol	20.00
B Wacker HDK H 15/Silica Dimethyl Silylate	1.00
Locron P/Aluminum Chlorhydrate	25.00
C Wacker-Belsil DM 100/Dimethicone	2.00
Wacker-Belsil CM 040/Cyclomethicone	30.00
Fragrances, pigments	q.s.

Mix A and heat to 65C. Stir B into A, cool to approx. 45C
 and then add C.
 Formulation 280 AH

Antiperspirant Roll-On
White, low viscosity

<u>Ingredients:</u>	<u>Wt%</u>
A Wacker-Belsil CM 040/Cyclomethicone	70.00
Wacker-Belsil DM 100/Dimethicone	5.00
B Tegin M/Glyceryl Stearate	2.70
C Locron P/Aluminum chlorhydrate	20.00
Wacker HDK H 15/Silica Dimethyl Silylate	1.00
Fragrances, pigments	q.s.

Mix A, melt B and stir into A, mix C and stir into AB
 homogeneously.
 Formulation 178/2 AH

SOURCE: Wacker-Chemie GmbH: Formulas for Beauty

Antiperspirant Suspension Roll-on

A typical antiperspirant suspension roll-on. Cyclomethicones, SF1173 and SF1202, act as fugitive carriers for the antiperspirant active, thus providing a dry, non-greasy feel. The type of cyclomethicone for antiperspirant products is generally chosen based on evaporation rate. Various mixtures of the different cyclomethicones are used depending on the desired properties of the finished formulation. SF96 (50) provides anti-whitening properties.

Materials:

	Wt%
Cyclomethicone (SF1173)	45.7
Cyclomethicone (SF1202)	19.5
Dimethicone [SF96 (50)]	5.0
Quaternium-18 Hectorite	2.5
Ethanol	2.0
Aluminum Zirconium Tetrachlorohydrate Gly (ZAG)	25.0
Silica	0.3

Procedure:

1. Mix SF1173, SF1202 and quaternium-18 hectorite in a high speed mixer.
2. Add SF96 (50) and ethanol and continue mixing.
3. Add silica and ZAG and mix an additional 15 minutes.
4. Transfer the material to a homogenizer such as an Eppenbach Homomixer and homogenize for 3 minutes at high speed.
5. Check viscosity. It should be approximately 3000 cps.

Formula AP101

Antiperspirant Roll-on Emulsion

Similar to formulation AP102, a simple emulsion demonstrating the use of SF1328 as a water-in-oil emulsifier. By decreasing the internal phase, the viscosity of the emulsion is reduced thus, providing a roll-on product instead of a gel. Cyclomethicone is the external phase to provide a dry, non-greasy feel and to reduce tack. The product is opaque but can be clarified by matching the refractive index of Part A and Part B. This is often done by adding propylene glycol to Part B.

Materials:

	Wt%
Part A:	
Cyclomethicone (and) Dimethicone Copolyol (SF1328)	7.50
Cyclomethicone (SF1204)	20.50
Part B:	
Polysorbate-80	0.11
Aluminum Zirconium Tetrachlorohydrate Gly (ZAG)	20.00
Water	51.89

Procedure:

1. Mix together Part A ingredients.
2. Dissolve polysorbate-80 into warm water.
3. Add ZAG to the water and polysorbate-80 solution and mix to form Part B.
4. Slowly add Part B to Part A with moderate shear mixing. Gradually increase agitation to high shear as the mixture thickens. Continue agitation for 5 minutes.
5. Homogenize 1-2 minutes with a high speed/high shear mixer such as an Eppenbach mixer.

Formula AP 103

SOURCE: GE Silicones: Personal Care Formulary: Formulas

Deodorant Stick

<u>Ingredient:</u>	<u>Wt%</u>
Propylene Glycol	49.50
Carbowax 1540	6.00
Triclosan	0.25
Promidium SY	7.00
DI Water	27.25
Monateric CLV	2.00
Fragrance	2.00
Sodium Stearate	6.00

Procedure:

Heat the Promidium SY, Propylene Glycol and Carbowax 1540 to 70-75C. Add the Triclosan. Mix. Add the fragrance, Monateric stirring slowly. Add the Sodium Stearate, when melted, add water slowly. Discontinue heating. Cool, fill warm.

Formula F-850

Deodorant Stick with Phospholipid CDM

<u>Ingredient:</u>	<u>Wt%</u>
Propylene Glycol	50.50
Carbowax 1540 (PEG-32)	6.00
Promidium SY (PPG-3 Hydroxyethyl Soyamide)	7.00
Phospholipid CDM (Coco PG-Dimonium Chloride Phosphate)	1.00
Triclosan	0.25
Monateric CLV (Disodium Cocoamphodiacetate)	2.50
Fragrance	2.00
Sodium Stearate	6.00
Water	24.75

Procedure:

Heat the Promidium SY, Propylene Glycol and the Carbowax 1540 to 70-75C. Add the Triclosan. Mix. Add the fragrance, Phospholipid CDM and Monateric stirring slowly. Add the Sodium Stearate, when melted, stir and add water slowly. Discontinue heating. Cool, fill warm.

Formula F-851

SOURCE: Mona Industries, Inc.: Formulas F-850 and F-851

Promidium Deodorant Stick

The following deodorant stick applies smoothly and leaves you feeling fresh and confident all day long.

<u>Ingredient:</u>	<u>Wt%</u>
Propylene glycol	60.00
PEG-32	6.00
Triclosan	0.20
Promidium CO (PPG-2 Hydroxyethyl Cocamide)	7.00
Water	15.30
Monateric CLV (Disodium Cocoamphodiacetate)	2.50
Fragrance	2.00
Sodium Stearate	7.00

Procedure:

Heat the Promidium CO, Propylene Glycol and the PEG-32 to 70-75C. Add the Triclosan. Mix. Add the fragrance and Monateric, stirring slowly. Add the Sodium Stearate. When melted, add water slowly. Discontinue heating. Cool, fill warm.

SOURCE: Mona Industries, Inc.: Formula F-852

Antiperspirant Stick

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Part A:	
Stearyl Alcohol	20.00
Schercemol BE/Behenyl Erucate	10.00
Schercemol DIS/Diisopropyl Sebacate	15.00
DC 344 Fluid/Cyclomethicone	15.00
Schercemol PGMS/Propylene Glycol Stearate	10.00

Part B:

Cornstarch	10.00
Rezal 36 GP/Aluminum Zirconium Tetrachlorohydrate GLY	20.00

Procedure:

Heat and melt Part A (60-65C) until homogeneous. Add Part B. Mix well. Cast into molds.

SOURCE: Scher Chemicals, Inc.: Formula SK 152

Section II

Baby Products

Aloe Baby Lotion

A gentle moisturizing lotion containing Liponate TDTM to provide a cushioning effect and extended slip with various natural oils to moisturize the skin.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	76.50
1	Aloe Vera Gel/Aloe Barbadensis Gel	1.75
1	Uniphen P-23	0.65
1	Liponic EG-1/Glycereth-26	1.00
1	Hampene Na3T/Trisodium EDTA	0.05
2	Carbopol 2984(2%)/Carbomer	12.50
3	Lipo Stearic Acid	1.25
3	Liponate NPGC-2	1.75
3	Lipovol CO/Castor Oil	0.25
3	Lipomulse 165/Glyceryl Stearate (and) PEG-100 Stearate	1.50
3	Lipocol C/Cetyl Alcohol	0.60
3	Liponate TDTM/Tridecyl Trimellitate	0.25
3	Lipowax P/Emulsifying Wax, NF	0.25
3	Lipovol SAF/Safflower Oil	0.60
3	Lipovol MAC/Macademia Ternifolia Nut Oil	0.25
3	Shea Butter	0.25
3	Vitamin E Acetate/Tocopheryl Acetate	0.05
4	Sodium Hydroxide (18%)	0.50
5	Gorgonium Extract*/Sea Whip Extract	0.05
*Patent #4,849,410 (and) 4,745,104		

Procedure:

1. Heat Sequence #1 to 76C on overhead mixer at medium/high speed.
2. Heat Sequence #2 to 60C and add to Sequence #1 with medium/high speed on overhead mixer with holding batch temperature at 76C.
3. Heat premixed Sequence #3 to 78C until clear and add to batch with medium/high speed on overhead mixer.
4. Add Sequence #4 to batch with medium/high speed. Cool to 40C.
5. At 40C, add Sequence #5. Cool to room temperature.

Specifications:

pH: 6.10+/-0.2

Viscosity: LVT #4 @ 12 rpm: 20,000 cps+/-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 998

Baby Bath

Starting formula for high quality baby bath.

<u>Ingredients:</u>	<u>Wt%</u>
Water	to 100
PEG-80 glyceryl cocoate	10.00
Chembetaine C	8.40
Sulfochem TD-3	15.00
Disodium Cocoamphodiacetate	1.80
PEG-150 distearate	1.75
Glycerin	1.80
Laureth-13 carboxylate	0.25
Preservatives, colors, fragrance	q.s.

Blending Procedure:

Mix ingredients in order listed, heating to 60-65C to dissolve PEG-150 distearate. Adjust pH with citric acid to desired pH.

Formulation No. F1013

Baby Shampoo

Starting formula for high quality baby shampoo

<u>Ingredients:</u>	<u>Wt%</u>
Water	to 100
PEG-80 sorbitan laurate	8.70
Chembetaine C	8.40
Sulfochem TD-3	8.00
Cocoamphocarboxyglycinate	2.00
Sodium chloride	q.s.
PEG-150 distearate	2.00
Laureth-13 carboxylate	0.25

Blending Procedure:

Mix ingredients in order listed, heating to 60-65C to dissolve PEG-150 distearate. Add NaCl to desired viscosity, if necessary. Adjust pH with citric acid to desired pH.

Formulation No. F1011

SOURCE: Chemron Corp.: Suggested Formulations

Baby Lotion with Vitamin E and Aloe

A smooth, nongreasy lotion which rubs in easily.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Propylene Glycol Dicaprylate/Dicaprate/Myritol PC	5.00
Mineral Oil/Drakeol 7	9.00
Petrolatum/Snow Petrolatum	4.00
Emulsifying Wax/Polawax	4.20
Aloe Extract/Aloe Vera Lipo-Quinone Extract	0.10
Tocopheryl Acetate/Vitamin E Acetate	0.10
Cetyl Alcohol	0.25
Stearyl Alcohol	0.25
Propylparaben	0.15
B: Deionized Water	75.70
Propylene Glycol	1.00
Methylparaben	0.10

C: Diazolidinyl Urea/Germall II	0.15
Fragrance	q.s.

Procedure:

Heat part A to 80C while gently mixing. Heat part B to 75C with stirring. Add part A to B with stirring and continue mixing with unforced cooling. At 40C add part C. Continue stirring to 30C.

Diaper Rash Cream with Aloe

This water-in-oil cream has an ointment-like consistency. High levels of petrolatum and mineral oil create an excellent moisture barrier.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Petrolatum/Ultima Petrolatum	19.00
Mineral Oil/Drakeol 9	7.50
Sorbitan Sesquioleate/Arlacel 83	3.50
Isostearyl Isostearate/Prisorine 2039	2.00
Aloe Extract/Activera 106 Lipo M	2.00
B: Deionized Water	55.50
Glycerin	1.50
Magnesium Sulfate	0.50
C: Zinc Oxide	7.50
D: Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben/Germaben II-E	1.00
Fragrance	q.s.

Procedure:

Heat part A to 80C with stirring. Heat part B to 80C with stirring. Add part B to A with vigorous stirring. Slowly sift Part C into rapidly stirred mixture. Allow the blend to cool with stirring. At 40C, add part D. Continue stirring to 30C.

SOURCE: Penreco: Suggested Formulations

Babymilk
fragrance-free

<u>Recipe:</u>	<u>Wt%</u>
A Hostacerin DGL/Polyglyceryl-2 PEG-10 Laurate	1.00
Hostacerin DGSB/Polyglyceryl-2 PEG-4 Stearate	3.00
Mineral oil, high viscosity	10.00
Calendula oil	1.00
Cetiol SN/Cetearyl Isononanoate	8.00
Chamomile oil	0.50
Antioxidant	q.s.
B Carbopol 980/Carbomer	0.20
C Allantoin	0.20
Aquamollin BC pdr.h.c./Ethylenediamine Tetraacetic Acid Sodium Salt	0.10
Citric acid (10% in water)	0.25
Extrapon witch hazel	2.00
Caustic soda solution (10%)	0.80
Water	72.95
Preservative	q.s.

Procedure:

1. Melt A at approx. 70C, then add B.
2. Heat C to approx. 70C.
3. Stir 2 into 1 and stir until cool.
4. Homogenize the emulsion.

Baby Cream

<u>Recipe:</u>	<u>Wt%</u>
A Hostacerin WO/Polyglyceryl-2 Sesquiisostearate, Cera Alba (Beeswax), Cera Microcrystallina (Microcrystalline Wax), Mineral Oil, Magnesium Stearate, Aluminum Stearate	8.00
Permulin 4200/Cera Microcrystallina (Microcrystalline Wax)	2.00
Amerlate W/Isopropyl Lanolate	2.00
Vaseline	10.00
Mineral oil, high viscosity	15.00
Isopropyl palmitate	5.00
Calendula oil	2.00
Antioxidant	q.s.
B Zinc oxide	10.00
Talc	5.00
C Allantoin	0.20
Aquamollin BC pdr.h.c./Ethylenediamine Tetraacetic Acid Sodium Salt	0.10
Citric acid (10%)	0.25
D-Panthenol	0.60
Water	39.65
Preservative	q.s.
D Fragrance	0.20

Procedure:

1. Melt A at approx. 80C, then add B.
2. Heat C to approx. 80C.
3. Stir 2 into 1 and stir until cool.
4. At approx. 35C add D to 3.

SOURCE: Hoechst Aktiengesellschaft: Formula A VI/5200&A VI/5804

Baby ShampooRaw Materials:

	<u>Wt%</u>
Mackadet BSC (Baby Shampoo Concentrate)	20.0
Sodium Chloride	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackadet BSC to water with slow agitation.
2. Heat to 40C.
3. Add Mackstat DM.
4. Adjust pH to 6.5-7.0 with Citric Acid.
5. Adjust viscosity to 2000 cps with Sodium Chloride.
6. Add Dye and Fragrance.
7. Cool to room temperature.

Baby WipesRaw Materials:

	<u>Wt%</u>
Propylene Glycol	4.0
Mackam 2C (Disodium Cocoamphodiacetate)	2.0
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	qs
Water, Fragrance	qs to 100.0

Procedure:

1. Blend components until clear.
2. Adjust pH to 6.0 with Citric Acid.

Note: The solution is to be combined with baby wipe tissues. It is very mild to the skin and eyes.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Baby Shampoo with Olive Oil

<u>Raw Materials:</u>	<u>Wt%</u>
A. Marlinat CM100 (Laureth-11 Carboxylic Acid)	15
Ampholyt JB130 (Cocamidopropylbetaine)	15
Softigen 767 (PEG-6 Caprylic/Capric Glycerides)	5
Imwitor 375	3
Olive Oil	1
Antil 141 liquid (thickener based on POE-Dioleate)	4
Water ad	100
Antioxidant	q.s.
Preservative	q.s.
B. Fragrance	0.3

Preparation:

All ingredients are put together, heated up to about 60C and stirred homogeneously. Then cool down to 30C and add fragrance.

Baby Care Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 960 flakes (Glyceryl Stearate SE)	17
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Softigen 701 (Glyceryl Ricinoleate)	2
Softisan 645	3
Avocado Oil	2
Mineral Oil	3
Antioxidant	0.02
B. Glycerol	4
D-Panthenol	3
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A and B are heated to about 75C by stirring until homogeneous. Then B is emulsified into A. C is added at ca. 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Baby Shampoo III

Starting formula for high quality baby shampoo

Ingredients:

	<u>Wt%</u>
Water	to 100
PEG-80 sorbitan laurate	8.50
Chembetaine CL	8.40
Sulfochem TD-3	8.30
Sodium lauroamphoacetate	1.80
Polyquaternium-10	0.10
PEG-150 distearate	1.75
Glycerin	1.80
Laureth-13 carboxylate	0.25
Preservatives, colors, fragrance	q.s.

Blending Procedure:

Mix ingredients in order listed, heating to 60-65C to dissolve PEG-150 Distearate. pH with citric acid to desired pH.

Typical Physical Properties:

pH: 6.58

Viscosity, cps: 920

Formulation No. F1002

Baby Shampoo

Starting formulation for a baby shampoo from a pre-blended concentrate.

Ingredients:

	<u>Wt%</u>
Sulfochem SBS	35.00
Water, soft	64.90
Fragrance	0.10
NaCl	q.s.
Preservatives	q.s.

Blending Procedure:

Charge mixing vessel with water and Sulfochem SBS, and mix until dissolved. Adjust pH with citric acid to 6.25-6.75. Add preservatives, color, and fragrance. Adjust viscosity to 1,000-1,500 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 1,000-1,500 cps

pH: 6.25-6.75

Formulation E3144

SOURCE: Chemron Corp.: Suggested Formulations

Diaper Rash Cream

This unique vitamin A&D fortified diaper rash cream is an emulsion based on Lubrasil DS and petrolatum. The Lubrasil DS lends a soft velvety feel as well as aiding in the water repellency. This formulation has a much lighter feel than the essentially 100% petrolatum based salves.

<u>Material:</u>	<u>Wt%</u>
A Deionized Water	53.27
B Propylene Glycol	1.00
C Methylparaben	0.18
D Propylparaben	0.05
E Petrolatum	15.00
F Cetiol LC (Coco-caprylate/caprate)	5.00
G Glycerol Monoisostearate	3.00
H Paraffin Wax 160/165	4.00
I Arlacel 83 (Sorbitan sesquioleate)	3.00
J Vitamin A/D3	0.50
K Lubrasil DS	15.00

Procedure:

1. Prepare the preservative blend by dissolving the methylparaben and propylparaben in the propylene glycol with a small amount of heat.
2. Place the water in a suitable mixing vessel and heat to 80C. Label this Phase I.
3. In a separate vessel, prepare Phase II by mixing components E, F, G, H and I and heating to 80C.
4. Using high shear mixing, slowly add Phase II to Phase I. Remove from heat.
5. Upon natural cooling to below 60C, using low shear mixing, add the preservative blend followed by the Vitamin A/D3 and Lubrasil DS. Allow the cream to mix well after each addition.
6. Packaging may be done warm.

SOURCE: Guardian Laboratories: Formulation #963031-AG

Sun Protection Baby Cream

A mild moisturizing cream with sunscreen to protect the skin and TDTM to add cushion and softness.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	57.35
1	Aloe Vera Gel/Aloe Barbadensis Gel	1.75
1	Uniphen P-23	0.50
1	Liponic EG-1/Glycereth-26	1.00
1	Hampene Na3T/Trisodium EDTA	0.05
2	Carbopol 2984(2%)/Carbomer	20.00
3	Lipo Stearic Acid	1.50
3	Liponate NPGC-2	1.75
3	Lipovol CO/Castor Oil	0.25
3	Lipomulse 165	1.50
3	Octyl Methoxycinnamate	6.00
3	Benzophenone-3	3.50
3	Lipocol C/Cetyl Alcohol	0.75
3	Liponate TDTM/Tridecyl Trimellitate	0.25
3	Lipowax P/Emulsifying Wax, NF	0.25
3	Lipovol SAF/Safflower Oil	0.75
3	Lipovol MAC/Macademia Ternifolia Nut Oil	0.25
3	Shea Butter	0.25
3	Vitamin E Acetate/Tocopheryl Acetate	0.05
4	Sodium Hydroxide (18%)	0.80
5	Gorgonian Extract*/Sea Whip Extract	0.25
6	Deionized Water	1.00
6	Unicide U-13/Imidazolidinyl Urea	0.25

*Patent #4,849,410 (and) 4,745,104

Procedure:

1. Heat Sequence #1 to 76C on overhead mixer at medium/high speed.
2. Heat Sequence #2 to 60C and add to Sequence #1 with medium/high speed on overhead mixer while holding batch temperature at 76C.
3. Heat premixed Sequence #3 to 78C until clear and add to batch with medium/high speed on overhead mixer.
4. Add Sequence #4 to batch with medium/high speed. Cool to 40C.
5. At 40C, add Sequence #5. Cool to 35C.
6. At 35C, add premixed Sequence #6. Cool batch to room temperature.

Specifications:

pH: 5.80+/-0.2

Viscosity: LVT #3 @ 3 rpm=31,000 cps.+/-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 1027

Tear Free Baby Bath

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam 2C (Cocoamphodiacetate)	35.0
Mackol 70NS (Sodium Laureth Sulfate-70%)	5.5
Mackam 35HP (Cocamidopropyl Betaine)	6.0
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfo-succinate)	4.0
Mackam CET (Cetyl Betaine)	1.5
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	0.7
Water	qs to 100.0

pH: 5.0-5.5

Viscosity (cps, 25C): 500

Procedure:

1. Add components to water.
2. Heat to 50C.
3. Blend until clear.
4. Adjust pH to 5.0-5.5 with Citric Acid.

Formulation BN-127C

Mild Children's Bubble Bath

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate EL (Disodium Laureth Sulfosuccinate)	10.0
Mackanate CP (Disodium Cocamido MIPA Sulfosuccinate)	10.0
Sodium Laureth Sulfate (30%)	9.0
Natrosol 250 HHR	1.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Disperse Natrosol 250 HHR in cold water.
2. Blend until completely dispersed.
3. Heat to 40C.
4. Add remaining components.
5. Blend until clear.
6. Cool to room temperature.

Baby Wash

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet BSC (Baby Shampoo Concentrate)	15.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add components to water.
2. Blend until clear.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Section III

Bath and Shower Products

Bath Oil

Colourless, clear, low viscosity

Ingredients:

	<u>Wt%</u>
A: Wacker-Belsil SDM 6022	1.00
Mineral Oil	69.00
B: Wacker-Belsil CM 020	25.00
Arlamol E	5.00
Preservatives, pigments, fragrances	q.s.

Heat A to 50C (mix in Wacker-Belsil SDM 6022 homogeneously),
mix B into A.

Temperature stability: at 45C over 10 weeks.

Formulation 330 AH

Bath Oil

Colourless, clear, low viscosity

Ingredients:

	<u>Wt%</u>
Wacker-Belsil CM 040	25.00
Mineral Oil	70.00
Arlamol E	5.00
Preservatives, pigments, fragrances	q.s.

Mix all components.

Temperature stability: at 45C over 10 weeks.

Formulation 350 AH

Shower Bath

Creamy, well foaming shower gel leaving a pleasant
touch on the skin.

Ingredients:

	<u>Wt%</u>
A: Texapon A	20.00
Texapon NA	20.00
B: Genapol PMS	3.00
Lanette O	1.00
C: Tylose H 4000 P	2.00
Wacker-Belsil DMC 6038	5.00
Water	49.00
Preservatives, fragrances, pigments	q.s.

Mix Tylose well into water, add Wacker-Belsil DMC 6038. Heat
A and B each to 70C, mix B into A, add C.
Formulation 1347/3 AH

SOURCE: Wacker Silicones: Suggested Formulations

Bubble Bath

Starting formulation for an economical pearly bubble bath.

<u>Ingredients:</u>		<u>Wt%</u>
Sulfochem B-2090P		25.00
Water, soft		73.65
Fragrance		0.25
NaCl	typical:	0.80
Citric acid	typical:	0.05
Preservatives		q.s.
Hydrolyzed milk protein		0.25

Blending Procedure:

With medium agitation, mix water, Sulfochem B-2090P, and milk protein in main vessel. Add citric acid and mix until solution is homogeneous. Add preservatives, fragrance, color, and remaining ingredients. Adjust pH to 7.0-7.5 with citric acid. Adjust viscosity to 4,000-5,000 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 4,000-5,000 cps

pH: 7.0-7.5

Formulation E3134

Bubble Bath

Prototype formulation for an economical bubble bath.

<u>Ingredients:</u>		<u>Wt%</u>
Sulfochem B-209		25.00
Water, soft		73.76
Fragrance		0.25
NaCl	typical:	0.90
Citric acid	typical:	0.09
Preservatives		q.s.

Blending Procedure:

With medium agitation, mix water and Sulfochem B-209 in main vessel. Add citric acid and mix until solution is clear and homogeneous. Add preservatives, fragrance, and color. Adjust pH to 6.5-7.5 with citric acid. Adjust viscosity to 3,500-5,000 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 3,500-5,000 cps

pH: 6.5-7.5

Formulation E3129

SOURCE: Chemron Corp.: Suggested Formulations

Clear Mild Body Wash

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam HPC-32 (Sodium Cocoamphoacetate)	5.0
Mackam 35-UL (Cocamidopropyl Betaine)	10.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	2.0
Mackpro WWP (Wheatgermamidopropyl Dimethylamine Hydrolyzed Wheat Protein)	1.0
Mackernium 007 (Polyquaternium-7)	2.0
Mackanate OM (Disodium Oleamide MEA Sulfosuccinate)	5.0
Mackanate EL (Disodium Laureth Sulfosuccinate)	5.0
Mackol 70NS (Sodium Laureth Sulfate)	17.0
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Fragrance, Water	qs to 100.0

Appearance: Viscous Lotion

pH: 6.0-6.5

Solids, %: 20.0-23.0

Procedure:

1. Completely disperse Mackernium 007 in water.
2. Add first seven components and mix thoroughly while heating to 35-40C.
3. Add Mackol 70NS and mix thoroughly.
4. Blend slowly and adjust pH to 6.0-6.5 with Citric Acid.
5. When product is completely homogeneous, add Paragon III.
6. Add Fragrance then cool and fill.

Emollient Bath Gelee

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Laureth Sulfate (60%)	20.0
Mackamide LLM (Lauramide DEA)	20.0
Mackanate EL (Disodium Laureth Sulfosuccinate)	20.0
Mackanate WGD (Wheatgermamido PEG-2 Sulfosuccinate)	10.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackamide LLM to Sodium Laureth Sulfate.
2. Add remaining components.
3. Heat to 45C.
4. Blend until homogeneous.
5. Adjust pH to 6.5-7.0 with Citric Acid.
6. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Conditioning Body Wash

<u>Raw Materials:</u>	<u>Wt%</u>
1. D.I. Water	qs
2. Mackol 70NS (Sodium Laureth Sulfate-70%)	20.0
3. Mackam HPC-32 (Sodium Cocoamphoacetate)	13.0
4. Mackamide CMA (Cocamide MEA)	1.0
5. Mackester EGMS (Glycol Stearate)	1.0
6. Mackamide S (Soyamide DEA)	1.0
7. Mackanate OPS (Disodium Oleamido MIPA Sulfosuccinate)	5.0
8. Mackpro WWP (Wheatgermamidopropyl Dimethylamine Hydrolyzed Wheat Protein)	1.5
9. Mackernium 007 (Polyquaternium 7)	2.0
10. Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
11. Ethylflo362 NF-Albemarle (Polydecene)	1.0
12. Fragrance	qs
13. Dye	qs
14. Citric Acid	0.3-0.6
15. Sodium Chloride	qs

This body wash will be a pearlescent viscous liquid (5,000-10,000 cps) with a pH of 5.5-6.5 and a concentration of approximately 30%.

Procedure:

- Charge ingredients 1, 2, and 3; heat to 55-60C with moderate agitation. Mix until clear and homogeneous.
- At 60C, add 4 and 5. Heat to 70C and hold for one hour. Ensure that there is no unmelted particulate matter in the batch.
- After 4 and 5 are fully dispersed, cool liquid to 40C. Charge ingredients 6 through 13.
- Add 14 (citric acid) to adjust pH to 5.5-6.5.
- Add 15 (sodium chloride) or water to reach desired viscosity. Cool and fill.

Bath Gelee with Natural Lipid Protein

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Laureth Sulfate (60%)	20.0
Mackamide CS (Cocamide DEA)	20.0
Mackanate CP (Disodium Cocamide MIPA Sulfosuccinate)	20.0
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	4.0
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

- Add Mackamide CS to Sodium Laureth Sulfate and blend.
- Add remaining components.
- Heat to 45C.
- Blend until homogeneous.
- Adjust pH to 6.5-7.0 with Citric Acid.
- Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Emollient Body Wash

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam HPC-32 (Sodium Cocoamphoacetate)	14.0
Mackol 70NS (Sodium Laureth Sulfate-70%)	17.0
Mackam 35-UL (Cocamidopropyl Betaine)	10.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	5.0
Mackester EGDS (Glycol Distearate)	3.5
Mackernium 007 (Polyquaternium-7)	3.0
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	0.6
Fragrance, Water	qs to 100.0

Appearance: Viscous Lotion

pH: 6.0-6.5

Solids, %: 26.0-28.0

Procedure:

1. Completely disperse Mackernium 007 in water.
2. Add first five components and heat to 75C.
3. Blend slowly and adjust pH to 6.0-6.5 with citric acid.
4. When product is completely homogeneous, add Paragon III.
5. Cool to 50C and add Fragrance.
6. Cool and fill.

Formulation No. 152B

Bath Gelee with Silk Protein Quaternized to Natural Skin Emollients

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Laureth Sulfate (60%)	20.0
Mackamide CS (Cocamide DEA)	20.0
Mackanate EL (Disodium Laureth Sulfosuccinate)	20.0
Mackpro NSP (Oleyl/Palmityl/Palmitoleamidopropyl/Silk-hydroxypropyl Dimonium Chloride)	4.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackamide CS to Sodium Laureth Sulfate and blend.
2. Add remaining components.
3. Heat to 45C.
4. Blend until homogeneous.
5. Adjust pH to 6.5-7.0 with Citric Acid.
6. Cool to room temperature.

SOURCE; McIntyre Group Ltd.: Personal Care Formulary: Formulas

Fitness Shower Gel
clear, 16.2% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Menthol	0.20
Camphor	0.10
Rosemary oil	0.30
Genapol L-3/Laureth-3	2.00
B 1,2-Propylene glycol	2.00
C Genapol LRO liquid/Sodium Laureth Sulfate	45.00
Genapol AMS/TEA-PEG-3 Cocamide Sulfate	4.00
Water	43.10
Horse chestnut extract	0.50
Dyestuff solution	q.s.
Preservative	q.s.
D Sodium chloride	2.80

Procedure:

1. Dissolve A in B.
 2. Stir the components of C into 1.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula A I/8077

Washing Lotion

clear, with a bacteriostatic effect, 10.4% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Octopirox/Piroctone Olamine	0.20
B Water	10.00
C Genapol AMS/TEA-PEG-3 Cocamide Sulfate	19.00
Fragrance	0.30
Dyestuff solution	q.s.
Preservative	q.s.
D Allantoin	0.20
E Water	59.80
F Genapol L-3/Laureth-3	0.50
Genagen CAB/Cocamidopropyl Betaine	8.00
G Glucamate DOE 120/PEG-120 Methyl Glucose Dioleate	2.00

Procedure:

1. Mix A with B.
 2. Add C to 1 and keep stirring until a clear solution has been obtained.
 3. Dissolve D in E while heating slightly.
 4. Add 3 to 1.
 5. Add the components of F.
 6. If necessary adjust the pH.
 7. Adjust the viscosity with G.
- Formula A II/4024

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Foam Bath

with a pearl-lustre effect, 19.9% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Hostapon CT paste/Sodium Methyl Cocoyl Taurate	8.00
B Water	33.20
C Genapol LRO liquid/Sodium Laureth Sulfate	40.00
Medialan LD/Sodium Lauroyl Sarcosinate	10.00
Genapol PGM/Sodium Laureth Sulfate, Glycol Distearate, Cocamide MEA	4.00
Fragrance	0.50
Dyestuff solution	q.s.
Preservative	q.s.
Genapol L-3/Laureth-3	2.00
D Sodium chloride	2.30

Procedure:

1. Dissolve A in B while heating slightly.
2. Stir the components of C one after another into 1.
3. If necessary adjust the pH.
4. Finally adjust the viscosity with D.

Formula A1/2011

Creamy Foam Bath

with a pearl-lustre effect, 21.7% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	60.00
B Medialan LD/Sodium Lauroyl Sarcosinate	8.00
Fragrance	1.50
Cetiol HE/PEG-7 Glyceryl Cocoate	5.00
Genapol PGL/Glycol Distearate, Cocamide MEA, PPG-4 Deceth-4	5.00
Water	13.00
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	6.00
Genapol L-3/Laureth-3	1.00
C Sodium chloride	0.50

Procedure:

1. Stir the components of B one after another into A.
2. If necessary adjust the pH.
3. Finally adjust the viscosity with C.

Formula A I/3026

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Foaming Bath Oil

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Light Mineral Oil	20
PEG 400 Monolaurate/PEG-8 Laurate	20
Schercemol Mel-3/Myreth-3 Laurate	8
Schercomid AME-100/Acetamide MEA	8
Schercoquat IALA/Isostearamidopropyl Laurylacetodimonium Chloride	15
Water, Deionized	29

Procedure:

1. Add the first five ingredients (oil phase).
2. With good mixing heat to 30-35C until uniform.
3. Cool to 25C and with fast agitation add the water in small increments; mix until clear.

Specifications:

Appearance @ 25C: Clear slightly viscous liquid
 Color: Colorless
 pH @ 1.0% sol'n (typical): 4.5

Bath Oil Milk

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Schercemol DIA/Diisopropyl Adipate	15
PEG 200 Dilaurate/PEG-4 Dilaurate	15
Schercemol Mel-9/Myreth-9 Laurate	5
Schercomid AME-100/Acetamide MEA	5
Schercoquat ALA/Di-Lauryl Acetyl Dimonium Chloride	15
Water, Deionized	45

Procedure:

1. Add the 1st five ingredients (oil phase).
2. With good mixing heat to 30-35C until uniform.
3. Cool to 25C and with fast agitation add the water in small increments; mix until the emulsion is uniform and smooth.

Specifications:

Appearance @ 25C: White emulsion
 pH @ 1.0% sol'n (typical): 4.5
 Viscosity @ 25C (typical): 3,000 cps
 Formula SO-015

SOURCE: Scher Chemicals, Inc.: Formulary

High Fragrance Bubble Bath

<u>Ingredient:</u>	<u>Wt%</u>
Water	23.2
Disodium EDTA	0.2
Sodium Laureth-2 Sulfate (26%)	69.0
Promidium CC (PPG-1 Hydroxyethyl Caprylamide)	2.5
Promidium SY (PPG-2 Hydroxyethyl Soyamide)	2.5
Fragrance	2.5
Citric Acid	0.1

Procedure:

To the water, add disodium EDTA and sodium laureth-2 sulfate with stirring. Premix Promidium CC, Promidium SY and fragrance. Add to sodium laureth-2 sulfate mixture. Add color, and preservative. Adjust the pH to 6.0 with citric acid.

Formulation Properties:

Appearance: Clear yellow liquid

Activity (%): 22.5

Viscosity (cP) @ 25C: 1400

Krafft Point: 3C

Note: Add sodium chloride if a higher viscosity is desired.

SOURCE: Mona Industries, Inc.: Formula F-861

Moisturizing Three Layer Bath Oil

A three-layer bath oil containing Panalane L-14E which is an effective moisturizer and skin emollient.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Cetiol HE/PEG-7 Glyceryl Cocoate	32.50
2	Panalane L-14E/Hydrogenated Polyisobutene	35.00
3	Glycerin	32.50

Procedure:

1. At room temperature, weigh Sequence #1 ingredient and pour into appropriate container.
2. Slowly add Sequence #2 into container on top of Sequence #1.
3. Slowly add Sequence #3 to the above two ingredients.

Note:

After the product has been shaken to achieve maximum benefits, it will take approximately 5-10 minutes to return to three-layer oil.

SOURCE: Lipo Chemicals Inc.: Formula No. 1082

Milk Bath

This low viscosity, milky product is designed to be added to a bathtub of water (2 fl. oz.). It provides a non-greasy, soft, silky feel to the skin.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
2-Phenoxyethanol/Preservative	0.2
DMDM Hydantoin/Preservative	0.2
Deionized Water/Diluent	70.6
Part B:	
Dimethicone (and) Laureth-4 (and) Laureth-23(SM2169)(1)/ Smooth, silky feel	15.0
Part C:	
Phenyl Trimethicone(SF1550)(1)/Emollient with non-greasy feel	7.5
Glycerin/Humectant	3.0
Part D:	
Fragrance	q.s.
PEG-20 Almond Glycerides(2)/Emollient/Solubilizer	3.5

Procedure:

1. Dissolve Part A with moderate propeller agitation.
2. Add Part B and continue stirring for 10-15 minutes.
3. Combine Part C. Add to batch and continue stirring for 15-20 minutes.
4. Combine Part D and add to batch. Continue mixing with moderate propeller agitation for 15-20 minutes.

Suppliers:

- (1) GE Silicones
(2) Croda, Inc.
Formula SP 112

After-Bath Oil

This oil, applied after bathing, gives the skin a soft, silky feel. SF1550 acts as a non-greasy emollient, while SF1204 promotes a quick dry time without a greasy feel.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Phenyl Trimethicone(SF1550)(1)/Non-oily emollient	10.0
Mineral Oil (light)/Emollient	32.0
Cyclomethicone(SF1204)(1)/Quick dry/Non-oily feel	56.0
Fragrance(2)	2.0

Procedure:

1. Mix together SF1550 and SF1204, stirring until uniform.
2. Add mineral oil with good mixing.
3. When homogeneous, slowly add fragrance and continue stirring 15 minutes.

Trade Names/Suppliers:

- (1) GE Silicones
(2) Fragrance J6-712-B, Bell Flavors and Fragrances
Formula SP 113

SOURCE: GE Silicones: Personal Care Formulary: Formulations

Moisturizing Body Wash

A liquid body wash product which is designed to cleanse and moisturize the skin. SM2169 is a 60% nonionic emulsion of a 60,000 ctsks dimethicone fluid. It provides the smooth, silky, feel of a high molecular silicone in an easy-to-use aqueous delivery system.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	51.45
Disodium EDTA/Chelating agent	0.05
Carbomer(1)/Thickener	1.00
Part B:	
Propylene Glycol/Humectant	1.00
Glycerin (96%)/Humectant	2.00
Part C:	
Sodium Laureth Sulfate (28-30%)/Surfactant	16.00
Disodium Dimethicone Copolyol Sulfosuccinate(30%)(2)/ Surfactant	15.00
Polysorbate-20/Emulsifier	1.00
Dimethicone (and) Laureth-4 (and) Laureth-23(SM2169)(3)/ Conditioning	5.00
Cocamidopropyl Betaine/Surfactant	3.00
Part D:	
Polyquaternium-39(4)/Conditioning	3.00
DMDM Hydantoin (and) Iodopropynyl Butylcarbamate(5)/ Preservative	0.15
Fragrance(6)	0.25
Part E:	
Triethanolamine(99%)/pH adjustment	1.10

Procedure:

1. Meter water of Part A into appropriate vessel. Add EDTA and mix until dissolved. With moderate propeller agitation, add the carbomer and mix for 20 minutes.
2. Add ingredients of Part B to Part A with moderate propeller agitation.
3. Add Part C to Part AB in order listed with moderate propeller agitation. Mix 20-30 minutes with moderate agitation.
4. Add Part D to batch in order listed. Mix with moderate agitation for 20 minutes.
5. Adjust batch to pH 5.5 with part E.

Trade Names/Suppliers:

- | | |
|-------------------|-----------------------|
| (1) Carbopol 2020 | (2) Mackanate DC-30 |
| (3) GE Silicones | (4) Merquat Plus 3330 |
| (5) Glydant Plus | (6) Fragrance TC-726 |

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 111

Moisturizing Shower Gel

Starting formulation for a high-foaming shower gel with moisturizing properties.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem SLS	14.00
Sulfochem ES-2	24.00
Chembetaine C	6.50
Chemoxide CAW	5.50
Citric acid	0.10
Water, soft	47.30
Amidex CME	1.80
Preservatives	q.s.
NaCl	0.50
Fragrance, color, etc.	q.s.

Blending Procedure:

At ambient temperature, charge mixing vessel with Sodium Lauryl Sulfate, Sodium Laureth Sulfate, and water. Add Cocamidopropyl Betaine, Cocamidopropylamine Oxide, and citric acid and mix until homogeneous. When mixture is homogeneous, heat to 70C and add Amidex CME, preservatives, color, fragrance, and NaCl. Adjust pH to 6.0-6.5 with citric acid. Adjust viscosity to 15,000 cps with NaCl.
Formulation No. F1004

Silky Shower Gel

Prototype formula for a shower gel that leaves skin with a soft, silky feel.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem ALS	37.00
Chembetaine S	3.50
Chembetaine OL	1.25
Citric acid	0.12
Water, soft	q.s.
Amidex CME	1.70
Quaternium 15	0.10
Preservatives	q.s.
NaCl	0.50

Blending Procedure:

At ambient temperature, charge mixing vessel with Sulfochem ALS and water. Add Chembetaine S, Chembetaine OL, and citric acid until homogeneous. When mixture is homogeneous, heat to 70C and add Amidex CME and NaCl. Adjust pH to 5.50-6.00 with citric acid. Adjust viscosity to 16,000 cps with NaCl.
Formulation No. F1003

SOURCE: Chemron Corp.: Suggested Formulations

Oil Foam Bath

<u>Raw Materials:</u>	<u>Wt%</u>
A. Marlinat 242/28 (Sodium Laureth Sulfate)	28
Ampholyt JB 130 (Cocamidopropyl Betaine)	7
Marlamid DF 1218 (Cocamide DEA)	8
B. Softigen 767	37
Miglyol 840 (Propylene Glycol Dicaprylate/Dicaprate)	20
Colour	q.s.
Fragrance	q.s.

Preparation:

A is mixed, heated up to approx. 75C and stirred cold to about 30C. B is subsequently admixed.

Mild Foam Bath

<u>Raw Materials:</u>	<u>Wt%</u>
A. Marlinat CM 105 (Sodium Laureth-11 Carboxylate)	25
Ampholyt JB 130 (Cocamidopropyl Betaine)	25
Softigen 767	5
Elfacos GT 282 S (Hydrogenated Talloweth-60 Myristol Glycol)	7
Colour	q.s.
Preservative	q.s.
Water ad	100
B. Fragrance	q.s.

Preparation:

A is mixed and heated to approx. 75C. Then the blend is stirred cold down to approx. 30C. B is gradually admixed.

Oil Bath Slightly Foaming with Good Refatting Property

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softigen 767 (PEG-6 Caprylic/Capric Glycerides)	21.5
Miglyol 812 (Caprylic/Capric Triglyceride)	27
Imwitor 375	22.5
Mineral Oil	26
Fragrance	3

Preparation:

All components are put together at about 40C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Pearlescent Bath Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Lauryl Sulfate (30%)	40.0
Mackanate EL (Disodium Laureth Sulfosuccinate)	30.0
Mackam 35HP (Cocamidopropyl Betaine)	5.0
Mackester SP (Glycol Stearate (and) Stearamide MEA)	1.5
Sodium Chloride	1.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add first four components to water.
2. Heat to 70C.
3. Blend until Mackester SP is completely dispersed.
4. Add Sodium Chloride and cool to 45C.
5. Add Mackstat DM, Dye, and Fragrance.
6. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Bath Oil

<u>INCI Name/Trade Name:</u>	<u>Wt%</u>
Phase A:	
Isopropyl Myristate/Emerset 2314	25.00
Octyldodecanol/Eutanol G	20.00
Caprylic/Capric Triglyceride/Myritol 318	38.00
Laureth-3/Dehydol LS3	10.00
Fragrance/Haarman & Reimer	4.90
Silica/Aerosil 200	2.00
Pearl Pigment	0.05-0.10

Procedure:

Aerosil 200 is added with stirring to a mixture of Isopropyl Myristate, Eutanol G, Myritol 318, Dehydol LS 3, and fragrance, then homogenized e.g. in an Ultra Turrax. Then the pearl pigment and the dyestuff solution are added with stirring.

Note:

- *Viscosity 3600 mPas (Brookfield LV3, 6 rpm @ 20C)
- *Recommended Pearl Pigments-All Sparkle pigments, e.g. Timiron Starlight Colors, Colorona Bronze Sparkle, Timiron MP-149

SOURCE: Rona/Em Industries, Inc.: Formulation EM2-49

Shower Cream

White, creamy

Ingredients:

	<u>Wt%</u>
A Teginacid/Glyceryl Stearate, Ceteareth-20	8.00
Adol 66/Isostearyl Alcohol	5.00
Isopropyl Myristate	6.00
Eutanol G/Octyldodecanol	4.00
B Texapon N 40/Sodium Laureth Sulfate	10.00
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate	5.00
Glycerine	5.50
Water	46.50
C Wacker Emulsion E 32/Stearyl Methicone, Trideceth-10	10.00
Preservative, fragrances, pigments	q.s.

Heat A and B each to 60-70C, mix B into A. Add C at approx. 35C.

Formulation 1113/2 AH

Shower Gel

Colorless, clear, high viscosity

Ingredients:

	<u>Wt%</u>
Genapol LRO/Sodium Laureth Sulfate	35.00
Dehyton AB 30/Coco-Betaine	10.00
Aethoxal B/PPG-5 Laureth-5	5.00
Wacker-Belsil DMC 6038/Dimethicone Copolyol	5.00
Comperlan KD/Cocamide DEA	3.00
Water	42.00
Preservative, fragrances, pigments	q.s.

Mix all ingredients well.

Formulation 895 AH

SOURCE: Wacker-Chemie GmbH: Formulas for Beauty

Shower Gel

clear, 15.4% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
B Genapol SBE/Disodium Laureth Sulfosuccinate	8.00
Fragrance	0.50
Water	52.00
Genapol L-3/Laureth-3	3.00
Dyestuff solution	q.s.
Preservative	q.s.
C Sodium chloride	1.50

Procedure:

1. Stir the components of B one after another into A.
 2. If necessary adjust the pH.
 3. Finally adjust the viscosity with C.
- Formula A I/8069

Shower Gel

with a pearl-lustre effect, 16.2% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	40.00
B Hostapon KCG/Sodium Cocoyl Glutamate	6.00
Fragrance	1.00
Genapol L-3/Laureth-3	1.50
Cetiol HE/PEG-7 Glyceryl Cocoate	5.00
Genapol PGL/Glycol Distearate, Cocamide MEA PPG-4	
Deceth-4	4.00
Dyestuff solution	q.s.
Preservative	q.s.
Water	34.20
Genagen CAB 818/Cocamidopropyl Betaine	6.00
C Sodium chloride	2.30

Procedure:

1. Stir the components of B one after another into A.
 2. If necessary adjust the pH.
 3. Finally adjust the viscosity with C.
- Formula A I/8072

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Shower Gel

with a silk-lustre effect, 17.9% active ingredient

Recipe:

	Wt%
A Genapol LRO liquid/Sodium Laureth Sulfate	40.00
B Genapol AMS/TEA-PEG-3 Cocamide Sulfate	9.75
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate	4.00
Fragrance	0.50
Water	35.40
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	8.00
C Sodium chloride	2.35

Procedure:

1. Stir the components of B one after another into A.
2. If necessary adjust the pH.
3. Finally adjust the viscosity with C.

Formula A I/8073

Shower Gel

clear, 17.6% active ingredient

Recipe:

	Wt%
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
B Genapol SBE/Disodium Laureth Sulfosuccinate	7.50
Hostapon KCG/Sodium Cocoyl Glutamate	5.00
Fragrance	0.50
C Allantoin	0.40
D Water	40.85
E Genagen CAB/Cocamidopropyl Betaine	8.00
Dyestuff solution	q.s.
Preservative	q.s.
Genapol L-3/Laureth-3	1.50
F Sodium chloride	1.25

Procedure:

1. Stir the components of B into A.
2. Dissolve C in D while heating slightly.
3. Stir 2 into 1.
4. Stir the components of E one after another into 1.
5. If necessary adjust the pH.
6. Finally adjust the viscosity with F.

Formula A I/8074

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Shower Gel

with a silk-lustre effect, 14.9% active ingredient

Recipe:

	Wt%
A Hostapon SCID/Sodium Cocoyl Isethionate	6.30
B Water	52.05
C Genapol ZRO liquid/Sodium Laureth Sulfate	30.00
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate	4.00
Fragrance	0.50
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	6.00
D Sodium chloride	1.15

Procedure:

1. Dissolve A in B while heating to 60C and cool down.
2. At 30C stir the components of C into 1.
3. If necessary adjust the pH.
4. Finally adjust the viscosity with D.

Formula A I/8075

Shower Gel

with a silk-lustre effect, 19.9% active ingredient

Recipe:

	Wt%
A Genapol LRO liquid/Sodium Laureth Sulfate	40.00
Medialan LD/Sodium Lauroyl Sarcosinate	13.00
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate	4.00
Fragrance	0.50
Water	29.75
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	8.00
Genapol L-3/Laureth-3	2.00
C Sodium chloride	2.75

Procedure:

1. Stir the components of B one after another into A.
2. If necessary adjust the pH.
3. Finally adjust the viscosity with C.

Formula A I/8079

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Shower Gel with Avocado Exfoliants

<u>Stage Materials/INCI Listing</u>	<u>Wt%</u>
Stage A:	
1 Water, Pure	64.100
2 Carbopol ETD 2020/Acrylates/C10-30 Alkyl Acrylate Crosspolymer	1.000
Stage B:	
3 EDTA, Disodium Salt/Disodium EDTA	0.100
4 Glycerine BP	2.000
5 Ammonium Lauryl Sulfate 30% Active	15.000
6 Disodium Laureth Sulfosuccinate 40%	10.000
7 Cocamidopropyl Betaine	3.000
8 Fragrance	0.500
9 Cosflor Awapuhi HGS	1.000
Stage C:	
10 Add preservative(s) & colour to suit	0.500
Stage D:	
11 Triethanolamine 99%	0.800
12 AEC Avocado Prills/Persea Gratissima (Avocado Oil)	2.000

Mixing Instructions:

Avocado Prills are smooth wax-like beads available in various colours which act as a gentle exfoliant. They are suspended in the shower gel by the high yield strength of the Carbopol ETD 2020.

- Stage A: Measure out the water and disperse the Carbopol ETD 2020 in this with moderate agitation until homogeneous.
- Stage B: Add each item in turn to Stage A with careful mixing.
- Stage C: Add preservatives and colour to suit.
- Stage D: Adjust pH to 6.0-6.5 by careful addition of TEA and then slowly mix in the Avocado Prills.

SOURCE: A&E Connock Ltd.: Formula Ref.: 1257*0

Shower Gel with Jojoba Wax ExfoliantsStage Materials/INCI Listing:Wt%Stage A:

1 Water, Pure	65.100
2 Carbopol ETD 2020/Acrylates/C10-30 Alkyl Acrylate Crosspolymer	1.000

Stage B:

3 EDTA, Disodium Salt/Disodium EDTA	0.100
4 Glycerine BP	2.000
5 Ammonium Lauryl Sulfate 30% Active	10.000
6 Disodium Laureth Sulfosuccinate 40%	12.000
7 Cocamidopropyl Betaine	5.000
8 Fragrance	0.500
9 Cosflor Tea Tree HGS	1.000

Stage C:

10 Add preservative & colour to suit	0.500
--------------------------------------	-------

Stage D:

11 Triethanolamine 99%	0.800
12 AEC Jojoba Wax Prills	2.000

Mixing Instructions:

Jojoba Wax Prills are smooth wax-like beads available in various colours which act as a gentle exfoliant. They are suspended in the shower gel by the high yield strength in the Carbopol ETD 2020.

Stage A: Measure out the water and disperse the Carbopol ETD 2020 in this moderate agitation until homogeneous.

Stage B: Add each item in turn to Stage A with careful mixing.

Stage C: Add preservatives and color to suit.

Stage D: Adjust pH to 6.0-6.5 by careful addition of TEA and then slowly mix in the Jojoba Wax Prills.

SOURCE: A&E Connock Ltd.: Formula Ref. 1258*0

Transparent Bath and Shower Bar

<u>Raw Materials:</u>	<u>Wt%</u>
Propylene Glycol	4.0
Ceteareth-27	16.0
Mackamide LMD (Lauramide DEA)	16.0
Mackam CB (Coco Betaine)	10.0
Mackol 70NS (Sodium Laureth Sulfate)	20.0
Poloxamer 407	4.0
Glycerin (99%)	14.0
Urea	6.0
Stearic Acid	8.0
50% Sodium Hydroxide	2.0
Fragrance	qs

This formulation will produce a clear, high foaming cleansing bar. The hardness of the bar can be varied with the concentration of the sodium stearate, which is made in situ using stearic acid and 50% sodium hydroxide. The bar is non-tacky and releases from its mold when cooled.

Procedure:

1. Blend all ingredients but the Urea, Stearic Acid, and 50% Sodium Hydroxide.
 2. Heat and stir until uniform at 60-65C.
 3. Add Urea and stir until clear at 60-65C.
 4. Add Stearic Acid, stir until clear while heating to 75-80C.
 5. Add 50% Sodium Hydroxide at 75-80C.
 6. Stir in Fragrance at 75-80C; package.
- Formulation No. 2

Bath Gelee

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Laureth Sulfate (60%)	34.6
Mackamide C (Cocamide DEA)	20.0
Mackanate EL (Disodium Laureth Sulfosuccinate)	45.0
Mackstat DM (DMDM Hydantoin)	qs
Dye, Fragrance	qs to 100.0

Procedure:

1. Add components in order.
2. Heat to 45C.
3. Blend until homogeneous.
4. Adjust pH to 6.0-6.5 with Lactic Acid.
5. Add Dye and Fragrance.
6. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary Formulations

Transparent Bath and Shower Bar

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Stearate	22.0
Propylene Glycol	5.0
Glycerine	15.0
Sorbeth-40	11.0
Mackamide L-10 (Lauramide DEA)	20.0
Sodium Cocoyl Sarcosinate	10.0
Urea	3.0
Water	4.0
Mackanate OP (Disodium Oleamido MIPA Sulfosuccinate)	10.0

Procedure:

1. Mix all ingredients except Sodium Stearate.
 2. Heat to 50-60C with slow agitation.
 3. Add Sodium Stearate slowly in small increments; heat to 85C; stir to clear.
 4. Stop agitation and allow air to rise.
 5. Pour into molds, cool and remove.
- Formulation No. 1

Shower Soap

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate EL (Disodium Laureth Sulfosuccinate)	20.0
Mackanate OM (Disodium Oleamido MEA Sulfosuccinate)	15.0
Sodium Lauryl Sulfate (30%)	10.0
Mackamide LLM (Lauramide DEA)	6.0
Mackpearl 202 (Pearling Agent)	3.0
Mackernium 007 (Polyquaternium 7)	2.5
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Disperse Mackernium 007 in water.
2. Add remaining components.
3. Heat to 40C.
4. Adjust pH to 6.0 with Citric Acid.
5. Adjust viscosity to 10,000 cps with Sodium Chloride.
6. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Ultra Mild Body Wash for Sensitive Skin

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam 2CY-75 (Disodium Capryloamphodiacetate)	14.0
Mackam 2S (Disodium Soyamphodiacetate)	4.0
Mackanate LO (Disodium Lauryl Sulfosuccinate)	32.0
Mackam 35-UL (Cocamidopropyl Betaine)	10.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	3.0
Mackester EGDS (Glycol Distearate)	3.5
Mackernium 007 (Polyquaternium 7)	1.0
Sodium Chloride	qs
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Fragrance	qs to 100.0
Appearance: Viscous Lotion	
pH: 6.0-6.5	
Solids, %: 24.0-27.0	

Procedure:

1. Completely disperse Mackernium 007 in water.
2. Add first six components and heat to 75C.
3. Blend slowly and adjust pH to 6.0-6.5 with Citric Acid.
4. When product is completely homogeneous, add Paragon III.
5. Cool to 50C and add Fragrance.
6. Add Sodium Chloride to adjust viscosity.
7. Cool and fill.

Ultra Mild Body Wash for Normal Skin

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam HPC-32 (Sodium Cocoamphoacetate)	14.0
Mackanate LO (Disodium Lauryl Sulfosuccinate)	32.0
Mackam 35-UL (Cocamidopropyl Betaine)	10.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	3.0
Mackester EGDS (Glycol Distearate)	3.5
Mackernium 007 (Polyquaternium-7)	1.0
Sodium Chloride	qs
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Fragrance, Water	qs to 100.0
Appearance: Viscous Lotion	
pH: 6.0-6.5	
Solids, %: 24.0-27.0	

Procedure:

1. Completely disperse Mackernium 007 in water.
2. Add first five components and heat to 75C.
3. Blend slowly and adjust pH to 6.0-6.5 with Citric Acid.
4. When product is completely homogeneous, add Paragon III.
5. Cool to 50C and add Fragrance.
6. Add Sodium Chloride to adjust viscosity.
7. Cool and fill.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Ultra Mild Body Wash for Dry Skin

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam HPC-32 (Sodium Cocoamphoacetate)	14.0
Mackanate LO (Disodium Lauryl Sulfosuccinate)	30.0
Mackam 35-UL (Cocamidopropyl Betaine)	10.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	6.0
Mackester EGDS (Glycol Distearate)	3.5
Mackernium 007 (Polyquaternium-7)	3.0
Sodium Chloride	qs
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Fragrance, Water	qs to 100.0

Appearance: Viscous Lotion

pH: 6.0-6.5

Solids, %: 24.0-27.0

Procedure:

1. Completely disperse Mackernium 007 in water.
2. Add first five components and heat to 75C.
3. Blend slowly and adjust pH to 6.0-6.5 with Citric Acid.
4. When product is completely homogeneous, add Paragon III.
5. Cool to 50C and add Fragrance.
6. Add Sodium Chloride to adjust viscosity.
7. Cool and fill.

Mild Bubble Bath

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet BBC (Disodium Laureth Sulfosuccinate (and) Sodium Laureth Sulfate)	20.0
Hydroxyethylcellulose	1.0
Paragon II (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

This bubble bath will be a flowable liquid with a pH of 6.0-7.0 and a concentration of approximately 10%.

Procedure:

1. Completely disperse the Hydroxyethylcellulose in cold water.
2. Heat to 40C.
3. Add Mackadet BBC and blend until clear.
4. Add Citric Acid, if necessary, to adjust pH.
5. Add Paragon II, Dye, and Fragrance.
6. Cool and fill.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

2 in 1 Shower Gel
17.2% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Allantoin	0.40
Polymer JR 400/Polyquaternium-10	0.50
Hostapon SCID/Sodium Cocoyl Isethionate	4.00
B Water	45.90
C Genapol LRO liquid/Sodium Laureth Sulfate	30.00
Hostapon KCG/Sodium Cocoyl Glutamate	5.00
Fragrance	0.50
Cetiol HE/PEG-7 Glyceryl Cocoate	2.00
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate	4.00
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	5.00
Genapol L-3/Laureth-3	2.00
D Sodium chloride	0.70

Procedure:

1. Dissolve the components of A by stirring into B and heating to approx. 60C.
 2. Cool down and add the components of C at approx. 35C while stirring.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula A I/8061

Shower Gel

with a pearl-lustre effect, 19.8% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Hostapon CT paste/Sodium Methyl Cocoyl Taurate	6.00
Hostapon SCID/Sodium Cocoyl Isethionate	2.70
B Water	41.40
C Genapol LRO liquid/Sodium Laureth Sulfate	40.00
Genapol PGM/Sodium Laureth Sulfate, Glycol Distearate, Cocamide MEA	6.00
Fragrance	1.00
Dyestuff solution	q.s.
Preservative	q.s.
Genapol L-3/Laureth-3	3.00
D Sodium chloride	0.40

Procedure:

1. Dissolve the components of A by stirring into B and warming to approx. 60C.
 2. Cool down and add the components of C at approx. 35C while stirring.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula A I/8078

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Section IV

Beauty Aids

After Bath Spray Moisturizer

This formulation demonstrates how easy it is to use CreamJel to produce creamy emulsions with difficult ingredients. This white lotion is an excellent moisturizer with a luxurious, silky feel and may be dyed and fragranced to suit any needs.

Material:

	<u>Wt%</u>
1 Volatile Silicone VS-7158	1.50
2 Isopropyl Palmitate	3.70
3 Myristyl Myristate	1.10
4 CreamJel	14.50
5 DI H ₂ O	78.20
6 Germaben II	1.00
7 Fragrance	q.s.

Procedure:

- 1.0 Combine components 1,2, and 3 in a suitable mixing vessel. Heat to 35-40C until the wax melts.
- 2.0 Place component 4 in a suitable mixing vessel. With rapid high shear mixing slowly add Step 1 and continue mixing until a smooth cream.
- 3.0 With continued high shear rapid mixing slowly add component 5 to step 2.
- 4.0 When a uniform, smooth lotion mix in component 6 followed by component 7 using low shear mixing.

Formulation 93105-GE

Clear Body Moisturizer

This formulation produces an excellent moisturizer which illustrates many benefits of incorporating Lubrajel into formulations. The moisturization is imparted by the addition of Lubrajel CG, while the smooth feel is due to the use of Lubrajel Oil. This formulation also illustrates how easy it is to formulate with the different grades of Lubrajel.

Material:

	<u>Wt%</u>
1 Deionized Water	81.0
2 Sodium Carboxymethylcellulose type 7H4F	1.0
3 Lubrajel CG	15.0
4 Lubrajel Oil	2.0
5 Germaben II	1.0

Procedure:

- 1.0 Place component 1 into a suitable mixing vessel. With rapid high shear mixing disperse component 2. Continue mixing until completely hydrolyzed.
- 2.0 Switch to paddle blade mixing and add components 3,4 and 5. Mix until homogeneous

Formulation No. 95003-E

SOURCE: Guardian Laboratories: Suggested Formulations

Anti-Aging Cream

Alpha Hydroxy Acids oil-in-water cream containing Bentone Gel TN and Bentone LT rheological additives.

<u>Ingredients:</u>	<u>Wt%</u>
Glyceryl Stearate (and) PEG 100 Stearate	6.00
Cetearyl Alcohol	2.00
Jojoba Oil	4.00
Sunflower Seed Oil	3.00
C12-15 Alkyl Benzoate	5.00
Glycerine USP, Palm Based	4.00
Vitamin E Acetate concentrate	2.00
Almond Protein Partial Hydrolysate	2.50
Mixed Fruit Extracts	4.00
Bentone Gel TN	3.00
Bentone LT (3% dispersion in water)	13.36
Perfume	0.20
Methyldibromoglutaronitrile and Dipropylene Glycol	0.20
Demineralized Water	Bal to 100%

Bentone LT dispersion:

Bentone LT	3.00
Deionized Water	97.00

Method of Manufacture:

1. Thoroughly disperse the Bentone Gel TN in the C12-15 Alkyl Benzoate, Jojoba Oil and Sunflower Seed Oil, by warming to 40C and stirring until uniform. Add the remaining components of the oil phase (GMS, Cetearyl Alcohol, and Vitamin E Acetate) and heat to 75-80C.
2. Heat the aqueous phase (Glycerine, Protein, Bentone LT dispersion and water) to 75-80C.
3. Using high shear mixing, add the two phases together and continue to homogenize.
4. At 45-50C transfer to a propeller stirrer and cool to 20C.
5. Add the Mixed Fruit Acids and stir well. Add the perfume and preservative.

Bentone LT Dispersion:

1. Prepare a 3% dispersion of Bentone LT additive in deionized water using a rotor-stator or similar high-shear mixer (e.g. Silverson). Start the mixer in the water, steadily add the Bentone LT to the vortex and stir until completely dispersed (15-20 mins).
2. Allow the suspension to stand to let any entrapped air escape.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Beta Hydroxy Moisturizing Clear Gel

A clear sprayable gel containing Lipo CD-SA which is a water soluble source of Beta Hydroxy Acid-Salicylic Acid. This gel also contains the moisturizing ingredients Unimoist U-125 and Hylucare.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	76.55
1	Uniphen P-23	0.30
1	Liponic EG-1/Glycereth-26	2.50
2	Viscarin SD 389/Carageenan	0.50
3	Lipo CD-SA	12.50
4	Unimoist U-125	2.00
5	Deionized Water	1.00
5	Unicide U-13/Imidazolidinyl Urea	0.25
6	Hylucare, 1% Sol'n/Water (and) Hyaluronic Acid	4.00
7	Sodium Chloride (25% Sol'n)	0.40
8	Triethanolamine, 99%	*QS
*To adjust pH		

Procedure:

1. Heat Sequence #1 to 75C on overhead mixer at medium/high speed.
2. Slowly add Sequence #2 to Sequence #1 and mix until completely hydrated.
3. Cool batch to 40C and add Sequence #3 at medium/low speed.
4. Add Sequence #4 to batch at medium/low speed and cool to 35C.
5. Add premixed Sequence #5 to batch at medium/low speed and cool to 25C.
6. At 25C, add Sequence #6 and Sequence #7 to batch in order of addition at medium/low speed.
7. Adjust pH to 3.8-4.2 using Sequence #8.

Specifications:

pH: 4.0+/-0.2

Viscosity: Brookfield LVT, spindle T-C @ 3.0 rpm = 17,700 cps+/-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 962

Cleansing Milk

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
A-A1 Arlacel 165/Glyceryl Stearate (and) PEG 100 Stearate	1.50
Schercemol NGDC/Neopentyl Glycol Dicaprate	20.00
B-B1 Deionized Water	37.00
Propylene Glycol	3.00
Carbopol 941 2% Aq. Soln.	25.00
B2 Deionized Water	10.00
Keltrol/Xanthan Gum	0.20
B3 Triethanolamine	0.50
B4 Schercomid AME-100/Acetamide MEA	1.50
C- Germaben II	1.00
D- Fragrance	0.30
E- Cucumber Extract	q.s.

Procedure:Phase B:

In the main beaker, disperse B1 at 75C.

Disperse B2 in a separate beaker at ambient temperature.

Add B2 to B1.

Add B3 to the main beaker at 75C.

Add B4 to the main beaker at 75C.

Phase A:

Blend A together at 75C.

Add Phase A to Phase B at 75C with continuous mixing until a homogeneous emulsion is formed (at least 15 minutes at 75C).

Cool batch to 60C and add Phase C.

Continue to cool batch to 30C and add fragrance.

Formulation L-213-1

Chapstick Prototype

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Petrolatum	48.0
Isopropyl Lanolate	6.0
Ozokerite	16.5
Candelilla Wax	4.5
Schercemol DID/Diisopropyl Dimer Dilinoleate	25.0

Procedure:

Heat all ingredients to 75-80C until melted and uniform.

Cast into molds.

Formulation SK 83

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Clear AHA Moisturiser

This clear water-in-silicone gel demonstrates the unique versatility of Dow Corning 3225C formulation aid in preparing stable low pH emulsions.

Ingredients:

	<u>Wt%</u>
Phase A:	
Dow Corning 1401 (Cylomethicone and dimethiconol)	10.00
Dow Corning 3225 C (Cyclomethicone and dimethiconol copolyol)	10.00
Dow Corning 344 (Cyclomethicone)	5.00
Phase B:	
Deionised water	to 100
Purasal S/PF 60 (60% sodium lactate)	5-12
Purac PH 90 (Lactic acid) to required pH	2- 5
Triethanolamine	3.5
Glycerin	27.0

Procedure:

1. Combine the ingredients in Phase A, mix until uniform, using a dual blade, turbulent style mixing action. Measure refractive index (RI).
2. Combine the ingredients in Phase B, mix until uniform. Measure RI.
3. If RI of Phase B is higher than A, add more water to match. If B is lower, add more glycerin to match.
4. Increase the mixing speed of Phase A to a tip velocity of 900 ft/min (i.e. a 2-inch blade at 1.376 rpm) and very slowly add Phase B. This addition should take 10 minutes.
5. Continue mixing for an additional 10 minutes.
6. Pass the emulsion through a high-shear, one pass device (i.e. colloid mill, Hydroshear, or hand-held mill) to achieve a particle size distribution ranging from 0.5-2.0 microns.

Stability:

- 2 months at 40C
- 5 Freeze-Thaw cycles
- 2 months ambient

SOURCE: Purac America, Inc.: Dow Corning Formulation

Cream Eye ShadowMaterial:

	<u>Wt%</u>
Part A:	
PPG-2 Myristyl Ether Propionate	41.28
Pigments	25.30
Unitwix	21.40
Super Refined Almond Oil	7.47
Stearic Acid	3.53
Cab-O-Sil	0.92
Fragrance	0.05
Propylparaben	0.05

Procedure:

1. Add the pigments to the PPG-2 Myristyl Ether Propionate while mixing with a low shear propeller blade at moderate speed.
2. In a separate vessel weigh out the Unitwix and the Cab-O-Sil. Heat gently with stirring to melt the Unitwix.
3. When the Unitwix is melted add the pigment blend and the Super Refined Almond Oil and mix while heating to 80-85C.
4. Slowly add the remaining components.
5. When well blended remove the heat and cool with mixing to 55C. Pour into desired containers.

Formulation 97048-U

Eye Firming Gel

This formulation, based on Lubrajel MS, is a classic display of the complementary properties of Lubrajel and liquid crystals. This Eye Firming Gel is visually very appealing. The Lubrajel MS is the sole moisturizing agent and viscosifier, while the liquid crystals add artistic elegance and moisture retention.

Material:

	<u>Wt%</u>
A Lubrajel MS	25.00
B Deionized Water	73.15
C Propylene Glycol, USP	1.75
D Methylparaben	0.08
E Propylparaben	0.02
F Liquid Crystal CN/G9	QS

Procedure:

1. Dissolve components D and E in component C. Use a small amount of heat if necessary.
2. Using a paddle blade, mix components A and B.
3. Add step 1 to step 2 and package into containers.
4. Add liquid crystals to each container using a swirling motion.

Formulation #92-043-E

SOURCE: Guardian Laboratories: Suggested Formulations

Creamy Lipstick

This smooth lipstick glides on easily, while mineral oil and petrolatum leave lips feeling moist and supple.

Ingredient/Trade Name:

	<u>Wt%</u>
A: Castor Oil	50.00
Mica (and) Titanium Dioxide/Timiron MP-1001	5.00
FD&C Red #40 Aluminum Lake (39%)	4.00
Mica (and) Titanium Dioxide (and) D&C Red No. 30/ Colorona Imperial Red	2.00
Titanium Dioxide/Micro Titanium Dioxide MT-100T	1.00
B: Pentaerythritol Tetraisostearate/Prisorine 3631	8.48
Beeswax/White Beeswax	7.25
Candelilla Wax	5.00
Mineral Oil/Drakeol 7	4.00
Myristyl Lactate/Ceraphyl 50	3.60
Petrolatum/Regent Petrolatum	3.40
Carnauba/Yellow Carnauba Wax #1	2.90
Ozokerite/White Ozokerite Wax 77W	2.10
Cetyl Esters/Spermaceti Substitute #573	1.24
BHT	0.03

C: Fragrance

q.s.

Procedure:

Mix part A and homogenize until uniform. Heat part B to 95C with stirring until the solids are melted. Add part A to part B with gentle mixing and allow the mixture to cool slightly. Add part C. Pour into molds and cool.
Formula 597-119

Lip Balm with Lanolin

Petrolatum and lanolin are used to keep lips soft and moist in this smooth-applying lip balm.

Ingredient/Trade Name:

	<u>Wt%</u>
Petrolatum/Ultima Petrolatum	47.50
Cetyl Palmitate	9.70
Trimethylolpropane Triisostearate/Prisorine 3630	9.10
Castor Oil	8.70
Candelilla Wax	5.80
Cetearyl Alcohol	4.70
Lanolin Oil/Ivarlan 3100	4.00
Carnauba/Yellow Carnauba Wax #1	3.70
Ozokerite/White Ozokerite Wax 77W	3.70
Lanolin	2.80
Tocopheryl Acetate/Vitamin E Acetate	0.10
Propylparaben	0.10
BHT	0.10

Procedure:

Heat all ingredients to 80-85C with stirring until all the mixture is homogeneous and the solids have melted. Pour into molds and allow to cool.
Formula 597-127

SOURCE: Penreco: Suggested Formulations

Deep Red Lipstick

This lipstick applies easily and gives the lips a soft feel.
Mineral oil and petrolatum help add moisturization.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Castor Oil	41.90
FD&C Red #40 Aluminum Lake (17%)	5.70
D&C Red #27 Aluminum Lake	2.40
Mica (and) Titanium Dioxide/Timiron MP-1001	1.90
Titanium Dioxide/Micro Titanium Dioxide MT-150W	0.95
B: Caprylic/Capric Triglyceride/Estol 1527	11.75
Petrolatum/Ultima Petrolatum	7.45
Propylene Glycol Dicaprylate/Dicaprate/Estol 1526	6.20
Carnauba/Yellow Carnauba Wax #1	5.70
Candelilla Wax	5.70
Beeswax/White Beeswax	4.30
Mineral Oil/Drakeol 21	2.85
Microcrystalline Wax	2.65
Tocopheryl Acetate/Vitamin E Acetate	0.50
BHT	0.05
C: Fragrance	q.s.

Procedure:

Homogenize part A until uniform. Heat part B to 80C with stirring until the solids are melted. Add part A with stirring and allow the mixture to cool to 75C. Add part C. Pour into molds and cool.

Formula 597-118

Lip Balm with Vitamin A

This lip balm is easily applied, leaving a light moisturizing layer on the lips to prevent chapping.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
Petrolatum/Snow Petrolatum	33.50
Mineral Oil/Drakeol 9	24.70
Ozokerite/White Ozokerite 77W	15.00
Beeswax/White Beeswax	10.00
Cetyl Alcohol	8.50
Candelilla Wax	7.20
Joboba Oil/Refined Jojoba Oil	0.80
Corn Oil (and) Retinyl Palmitate/Vitamin A Palmitate	
Type PIMO/BH	0.10
Propylparaben	0.10
BHT	0.10

Procedure:

Heat all ingredients to 80-85C with stirring until all the solids have melted and the mixture is uniform. Pour into molds and allow to cool.

Formula 597-125

SOURCE: Penreco: Suggested Formulations

Eye Area Firming Gel

Completech MBAC-EA helps to reduce fine lines and increases viscoelasticity of the skin. The addition of Hypan SA-100H adds clarity while aiding in the removal of tackiness. The result leaves the skin with an elegant feeling. The addition of Liponic EG-1, Hylucare and Unimoist U-125 aid in moisturization of the skin.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	61.95
1	Hampene Na2T/Disodium EDTA	0.05
1	Uniphen P-23	0.20
2	Liponic EG-1/Glycereth-26	1.50
2	Hypan SA100H/Acrylic Acid/Acrylonitrogens Copolymer	0.10
3	Carbopol ETD2001/Carbomer(2% disp)	20.00
4	Deionized Water	1.00
4	Triethanolamine, 99%	0.60
5	Lubrigel MS/Polyglycerylmethacrylate (and) Propylene Glycol	5.00
6	Unimoist U-125	1.00
7	Benzophenone-4	0.15
7	Deionized Water	1.00
7	Unicide U-13/Imidazolidinyl Urea	0.25
8	Hylucare (1% sol'n)/Hyaluronic Acid	1.00
9	Deionized Water	5.00
9	Completech MBAC-EA	1.20

Procedure:

1. Heat and mix Sequence #1 to 80C and mix until a clear solution is reached.
2. Premix Sequence #2 and add to Sequence #1 at 80C with medium/high speed on overhead mixer using propeller blade.
3. Heat Sequence #3 to 70C and add to batch bringing temperature back to 80C.
4. Premix Sequence #4 and add to batch on overhead mixer at medium/high speed. Mix for 15-20 minutes or until completely hydrated/neutralized.
5. Add non-heated Sequence #5 to batch with medium speed on overhead mixer. Lower temperature to 60C.
6. Add Sequence #6 into solution using low heat and add to batch with low/medium speed on overhead mixer with propeller blade. (Lower heat to 35C).
7. At 35C premix Sequence #7 until clear and add to batch. (Lower temperature to 25C).
8. At 25C add Sequence #8 at low speed using propeller blade.
9. Premix Sequence #9 until homogeneous and add to batch with low speed until completely mixed into batch.

SOURCE: Lipo Chemicals Inc.: Formula No. 836

Face Bronzer with Sunscreen

SF1214 is a blend of cyclomethicone and high molecular weight dimethicone. The cyclomethicone acts as an emollient and gives a dry, non-greasy feel. The high molecular weight dimethicone gives a soft, silky feel when applied to the skin. SS4267 is a blend of a low molecular weight dimethicone and a silicone resin which is film-forming and provides a more durable product.

Ingredient/Function:

	Wt%
Part A:	
Water	52.9
Carbomer (1)/Suspending/Thickener	0.5
DMDM Hydantoin/Preservative	0.4
Dehydroacetic Acid/Preservative	0.1
Sodium Hydroxide (40%)/Neutralizer	0.4
Glycerin/Humectant	5.0
Part B:	
Stearyl Alcohol (and) Ceteareth-20 (2)/Emulsifier/ Thickener	2.2
Glyceryl Stearate (and) PEG-100 Stearate (3)/Emulsifier	5.0
Cetyl Alcohol/Viscosity/Opacifier	0.6
Isopropyl Isostearate/Emollient	3.9
Mineral Oil/Emollient	7.5
Myristyl Lactate/Emollient	0.5
Octyl Methoxycinnamate/UV absorber	7.0
Benzophenone-3/UV absorber	4.0
Part C:	
Mica (and) Titanium Dioxide (and) Iron Oxides (4)/Pigment	5.0
Part D:	
Dimethicone (and) Trimethylsiloxysilicate (SS4267) (5)/ Film-former	3.0
Cyclomethicone (and) Dimethicone (SF1214) (5)/Smooth, silky feel/Emollient	2.0

Procedure:

1. In Part A, predissolve carbomer in warm water. Heat to 75C and add other Part A ingredients.
2. Heat Part B to 75C until all ingredients are melted with moderate agitation.
3. Slowly add Part B to Part A with good mixing.
4. Cool with continued mixing to 60C and add Part C.
5. Continue mixing until 55C and add Part D.
6. Mix and cool to 25C and mill through a colloid mill at 0.005" setting.

Comments:

- * Reduce greasiness by replacing isopropyl isostearate with SF1202 cyclomethicone.
- * Increase water resistance by increasing SS4267.
- * Increase viscosity by decreasing glycerin level.

Trade Names/Suppliers:

- (1) Carbopol 980, B.F. Goodrich Co.
- (2) Promulgen G, Amerchol Corp.
- (3) Arlacel 165, ICI Surfactants
- (4) Timica Gold Sparkle, Mearl Corp.
- (5) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CC 104

Face Bronzer with Sunscreen

SFE839 Elastomer Dispersion is a 5.5% silicone elastomer dispersed in cyclopentasiloxane, which provides excellent aesthetics, creating a smooth, silky luxurious feel. The cyclopentasiloxane acts as an emollient and gives a dry, non-greasy feel. The SFE839 blend is a film former and provides a more durable product.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Water	52.9
Carbomer (1)/Suspending Agent/Thickener	0.5
DMDM Hydantoin/Preservative	0.4
Dehydroacetic Acid/Preservative	0.1
Sodium Hydroxide (40%)/Neutralizer	0.4
Glycerin/Humectant	5.0
Part B:	
Stearyl Alcohol (and) Ceteareth-20 (2)/Emulsifier/ Thickener	2.2
Glyceryl Stearate (and) PEG-100 Stearate (3)/Emulsifier	5.0
Cetyl Alcohol/Viscosity Modifier/Opacifier	0.6
Isopropyl Isostearate/Emollient	3.9
Mineral Oil/Emollient	7.5
Myristyl Lactate/Emollient	0.5
Octyl Methoxycinnamate/UV Absorber	7.0
Benzophenone-3/UV Absorber	4.0
Part C:	
Mica (and) Titanium Dioxide (and) Iron Oxides (4)/Pigment	5.0
Part D:	
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer (SFE839) (5)/Smooth, silky feel	5.0

Procedure:

1. In Part A, predissolve carbomer in warm water. Heat to 75C and add other Part A ingredients.
2. Heat Part B to 75C until all ingredients are melted with moderate agitation.
3. Slowly add Part B to Part A with good mixing.
4. Cool with continued mixing to 60C and add Part C.
5. Continue mixing until 55C and add Part D.
6. Mix and cool to 25C and mill through a colloid mill at 0.005" setting.

Comments:

Increase viscosity by decreasing glycerin level.

Trade Names/Suppliers:

1. Carbopol 980, B.F. Goodrich Co.
2. Promulgen G, Amerchol Corp.
3. Arlacel 165, ICI Surfactants
4. Timica Gold Sparkle, Mearl Corp.
5. GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CC107

Facial Cleanser High-foaming facial cleanser.

<u>Ingredients:</u>	<u>Wt%</u>
Potassium Cocoate	10.83
Water	39.70
Sulfochem SLS	36.93
Stearic Acid	3.46
Chemsperse EGDS	0.95
Chembetaine C	4.76
Amidex CE	3.37
Preservatives	q.s.
Fragrance, color, etc.	q.s.

Blending Procedure:

Mix potassium cocoate, water, and SLS, and heat to 90C in main mixing vessel. Add premelted stearic acid, maintain temperature, and mix until emulsified (about 5 to 10 minutes). Add EGDS. Turn off heating, begin cooling, and add Chembetaine C and Amidex CE. When temperature reaches 45C or below, add preservatives, fragrance, and color.

Typical Physical Properties:

pH: 6.5

Viscosity: 7,200 cps

Appearance: Pearly white liquid

Note:

This formula will yield a product with a viscosity of approximately 7,000 cps. To make a product with higher viscosity, increase the level of the potassium cocoate and stearic acid, maintaining the same ratio between the two. To make a product with lower viscosity, decrease the level of potassium cocoate and stearic acid, maintaining the same ratio between the two. Formulation No. F1007

Facial Cleanser

Starting formulation for a premium, mild facial cleanser.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem SBS	36.00
Water, soft	63.88
Fragrance	0.10
NaCl	q.s.
Preservatives	q.s.
Citric acid	typical: 0.02

Blending Procedure:

Charge mixing vessel with water and Sulfochem SBS, and mix until dissolved. Adjust pH with citric acid to 6.5-7.0. Add preservatives, color, and fragrance. Adjust viscosity to 1,200-2,500 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 1,200-2,500 cps

pH: 6.5-7.0

Formulation No. E3145

SOURCE: Chemron Corp.: Suggested Formulations

Facial Mask

This ultra mild, deep cleansing formulation will eliminate little imperfections and blemishes to leave the skin silky smooth. Monafax MAP 230 helps in the the dispersion of the bentonite clay and allows for an even layer of the clay to be spread over the skin for easy application. The Phospholipid CDM provides gentle cleansing, excellent substantivity, and anti-microbial properties on the skin.

<u>Ingredients:</u>	<u>Wt%</u>
Water	76.4
Disodium EDTA	0.1
Polargel NF (Bentonite)	12.5
Monafax MAP 230	5.0
Propylene Glycol	4.0
Phospholipid CDM	1.0
Germaben IIE	1.0

Procedure:

Heat water to 50-60C, add Na₂ EDTA. Slurry the Polargel NF very slowly with shearing agitation. After slurry is achieved, let it hydrate by having it stand for 10-15 minutes. Add the Monafax MAP 230 slowly allowing it to blend evenly in the slurry. Add the remaining ingredients in order listed, the same way the Monafax MAP 230 was added. Package in tubes.

Important Notes:

- Minimize water loss
- Minimize aeration

SOURCE: Mona Industries, Inc.: Formula F-827

Facial Gel Cleanser

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water	72.25
Schercoquat IAS-LC/Isostearamidopropyl Ethyl Dimonium	
Ethosulfate	0.55
Schercotaine CAB-G, 35%/Cocamidopropyl Betaine	10.00
Sodium Lauryl Sulfate, 30%	17.00
Preservative	0.20
Fragrance	q.s.

Procedure:

1. Heat water to 50C. With stirring add Schercoquat IAS-LC until it is dissolved.
2. Add the other ingredients in the order given, with continual agitation while allowing the batch to cool.

Appearance: Gel

Viscosity: 8,000 cps

Formula SK 142

SOURCE: Scher Chemicals, Inc.: Formula SK 142

Facial Scrub

<u>Stage Materials:</u>	<u>Wt%</u>
Stage:	
Pre-Mix 1:	
1 Water; Pure	72.050
2 Carbopol 940	0.200
Pre-Mix 2:	
3 Propylene Glycol USP	6.000
4 Preservative as required	0.300
Stage A:	
5 Magnesium Sulphate	0.100
Stage B:	
6 Light Mineral Oil	8.000
7 GMS s/e	4.000
8 Stearic Acid-Triple Pressed	3.000
9 Almond Oil USP, Sweet	1.100
10 Peach Kernel Oil	1.100
Stage C:	
11 Triethanolamine 99%	0.900
Stage D:	
12 AEC Walnut Shell Powder	3.000
Cooling Cycle:	
13 Fragrance	0.250

Mixing Instructions:

Pre-Mix 1: Meter out water and start heating. Sprinkle in Carbopol and mix until all lumps are dispersed.

Pre-Mix 2: Dissolve preservative in Propylene Glycol and add to Mix.

Stage A: Complete Stage A by adding Magnesium Sulphate to mix and bring to temperature (70C).

Stage B: Melt the Oils and waxes of Stage B and mix, bring to temperature.

With the Silverson running slowly add the hot oils to the hot Aqueous Phase, mix briefly then add the Triethanolamine which will thicken the product. Start cooling with mixing, before the product gets too thick add the Walnut Shell and mix until dispersed, add the perfume and mix briefly. (Silverson mixing after addition of walnut shell should be avoided).

SOURCE: A&E Connock Ltd.: Formula Ref.: 784*0

Facial Soap

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet 40-K (Potassium Cocoate)	25.0
Mackam 2C (Disodium Cocoamphodiacetate)	20.0
Mackamide LLM (Lauramide DEA)	2.0
Mackester EGMS (Glycol Stearate)	1.0
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water, Fragrance	qs to 100.0

Procedure:

1. Add components to water.
2. Heat to 70C.
3. Blend until homogeneous; cool to 50C.
4. Adjust pH to 7.0-7.5 with Citric Acid.
5. Add Mackstat DM and Fragrance.
6. Cool to room temperature.

Sting Free Facial Cleanser

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam 2C (Disodium Cocoamphodiacetate)	40.0
Sodium Laureth-1 Sulfate (25%)	15.0
Mackernium 007 (Polyquaternium 7)	1.5
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfo-succinate)	4.0
Mackester SP (Glycol Stearate (and) Stearamide MEA)	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackam 2C, Sodium Laureth-1 Sulfate, Mackanate DC-30, and Mackester SP to water.
2. Heat to 70C and blend until homogeneous.
3. Cool to 50C and slowly add Mackernium 007.
4. When completely dispersed, add remaining components.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Cleansing Milk

<u>Raw Materials:</u>	<u>Wt%</u>
Lanolin Anhydrous	5.0
Propylene Glycol Monostearate	3.0
Polysynlane	38.0
IPM	4.0
Paraffin Wax	4.0
Beeswax	16.0
Potassium Hydroxide	0.7
Perfume & Preservatives	q.s.
Water	ad. 100.0

SOURCE: Polyester Corp.: Suggested Formulation

Lip Balm

This mildly strawberry flavored lip balm formulation exhibits a typical application of Unitwix to form lipstick type products for personal care. A sunscreen has been added in order to lend some protection against UV radiation and Oil of Orchids is added to improve the feel.

<u>Material:</u>	<u>Wt%</u>
A Petrolatum, USP	39.25
B Isopropyl Myristate	10.00
C Stearyl Alcohol	10.00
D Butyl Stearate	15.50
E Volatile Silicone VS-1758	10.00
F 556 Cosmetic Grade Fluid	2.00
G Oil of Orchids (OS)	2.00
H Octyl Dimethyl Paba	2.00
I Unitwix	8.50
J Flavor	0.17
K Calcium Saccharine	0.08
L Duochrome RY	0.50

Procedure:

1. Melt components A,B,C,D,G and I at approximately 70C.
2. Add remainder of components and mix while cooling to 50-55C.
3. Package.

Formulation #92-036-H

Lip Moisturizer

Utilizing Lubrajel CG and Solimate 'E', this formulation exhibits excellent lip moisturization, a pleasant taste and UV protection.

Solimate 'E' is used to microemulsify the sunscreen along with the peppermint and spearmint oils. The ultimate choice in moisturization is Lubrajel CG, which is used at a significant concentration for this purpose.

<u>Material:</u>	<u>Wt%</u>
A Lubrajel CG	50.00
B Deionized Water	46.72
C Solimate 'E'	2.50
D Octyl Salicylate	0.50
E Peppermint Oil, USP	0.05
F Spearmint Oil, USP	0.05
G FD&C Blue #1 (100ppm)	0.18

Procedure:

1. Premix components A and B and label as "Phase I."
2. Premix components C,D,E and F and label as "Phase II."
3. Premix component G (prepare the 100ppm solution) and label as "Phase III."
4. Add "Phase II" to "Phase I" with low speed stirring.
5. Add "Phase III" and continue stirring until uniform. Package.

Formulation #91-112

SOURCE: Guardian Laboratories: Suggested Formulations

Lip Gloss with D-Panthenol

<u>Raw Materials:</u>		<u>Wt%</u>
A. Softisan 645		44.5
Softisan 649		10
Softigen 701 (Glyceryl Ricinoleate)		10
Polyisobutene 1000		13
Lanfrax (Lanolin Wax)		10
Candelilla Wax		2.5
B. Pearlustre Pigment		3
Colour		2
D-Panthenol		5
Fragrance		q.s.

Preparation:

A and B are heated up to 75C. The mixture is chilled to about 40C by stirring. Then B is added. Preferably homogenize mixture before pouring.

Lip Stick

<u>Raw Materials:</u>		<u>Wt%</u>
Softisan 100 (Hydrogenated Cocoglycerides)		20
Miglyol 812 (Caprylic/Capric Triglyceride)		14
Softisan 649		5
Petrolatum		30
Beeswax		20
Paraffin		5
Cetyl Alcohol		5
Carnauba Wax		1

Preparation:

All ingredients are heated to 75C. Then the homogeneous compound is poured into moulds.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Liposilt Black Body Mask

A non-drying body mask that is rich in vitamins and minerals for skin cleansing and nourishment. The Liposilt Black is the source of the nutrients and yields a nourished and soft appearance to the skin.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	37.28
1	Uniphen P-23	0.60
2	Keltrol/Xanthan Gum	0.12
2	Mineral Colloid BP/Montmorillonite	0.10
3	Liposilt Black/Silt	30.00
3	Deionized Water	5.00
4	Lipovol SES/Sesame Oil	15.00
4	Lipo GMS-450/Glyceryl Stearate	2.50
4	Lipopeg 6000 DS/PEG-150 Distearate	0.50
5	Kaolin	7.50
6	Eucalyptus Oil	0.10
7	Deionized Water	1.00
7	Unicide U-13/Imidazolidinyl Urea	0.30

Procedure:

1. In main kettle combine Sequence #1 ingredients, mix with overhead mixer while heating to 78C.
2. Dry mix Sequence #2 together and add to Sequence #1 at medium speed on overhead mixer.
3. In auxiliary kettle combine Sequence #3 ingredients and heat to 65C. Place on homomixer for one (1) minute at medium speed.
4. Add Sequence #3 to batch under homomixer, holding temperature at 78C.
5. Heat Sequence #4 to 78C until completely melted and add to batch under homomixer.
6. Add Sequence #5 to batch under homomixer. Switch to moderate sweep and cool to 42C.
7. At 42C add Sequence #6 and mix until thoroughly dispersed. Cool to 35C.
8. At 35C add premixed Sequence #7 to batch and cool to 25C.

SOURCE: Lipo Chemicals Inc.: Formula No. 697

Liposilt Black Cleansing Silt

A non-drying cleansing mud that is rich in vitamins and minerals for skin cleansing and nourishment. The Liposilt Black is the source of the nutrients and yields a nourished and soft appearance and feel to the face. Suggested for oily skin.

<u>Sequence:</u>	<u>Raw Material:</u>	<u>Wt%</u>
1	Deionized Water	31.85
1	Methylparaben	0.25
2	Keltrol	0.15
2	Veegum HV (4% Disp'n)	0.50
3	Liponic EG-1	6.00
3	Lan-Aqua-Sol 75; 100	4.50
4	Triethanolamine, 99%	1.20
4	Deionized Water	1.00
5	Lipovol SES	12.00
5	Fancol IPL	3.50
5	Liponate NPGC-2	3.50
5	Lipo Stearic Acid	3.00
5	Lipolan Distilled	2.00
5	Lipo GMS-450	1.50
5	DC 200 Fluid (350 cts)	1.00
5	Lipopeg 100-S	0.90
5	Liposorb S	0.75
5	Lipocol C	0.50
5	Propylparaben	0.10
6	Hamposyl C-30	4.00
6	Monawet MO-70R	0.50
7	Liposilt Black	20.00
8	Deionized Water	1.00
8	Unicide U-13	0.30

Procedure:

1. Premix Sequence #1, heat to 80C and mix until dissolved using overhead mixer.
2. Dry mix Sequence #2 and add to Sequence #1 at 80C with overhead mixer at medium/high speed until completely homogeneous.
3. Add Sequence #3 ingredients one at a time to batch while bringing temperature batch to 80C.
4. Premix Sequence #4 and add to batch.
5. Mix Sequence #5 ingredients together and heat until completely melted (approximately 80C) and add to batch with overhead mixer at medium/high speed. Cool slowly to 70C.
6. At 70C add Sequence #6 ingredients in order of addition to batch.
7. Heat Sequence #7 to 50C and mix on homomixer for 1 minute at medium speed.
8. Add Sequence #7 to batch on overhead mixer using sweep blade and cool to 35C.
9. At 35C add premixed Sequence #8, cool to 25C and package.

SOURCE: Lipo Chemicals Inc.: Formula No. 675

Liposilt Green Cleansing Mud

A non-drying cleansing mud that is rich in vitamins and minerals for skin cleansing and nourishment. The Liposilt Green is the source of the nutrients and yields a nourished and soft appearance and feel to the face. Suggested for dry or sensitive skin.

<u>Sequence:</u>	<u>Raw Material:</u>	<u>Wt%</u>
1	Deionized Water	20.80
1	Keltrol F	0.15
1	Veegum HR (4% Disp'n)	12.50
1	Liponic EG-1	6.00
1	Triethanolamine 99%	1.20
1	Lan-Aqua-Sol 50	4.50
1	Methylparaben	0.30
2	Lipovol SES	12.00
2	Fancol IPL	3.50
2	Liponate NPGC-2	3.50
2	Lipo Stearic Acid	3.00
2	Lipolan Distilled	2.00
2	Lipo GMS-450	1.50
2	DC 200 Fluid (350 cts)	1.00
2	Lipopeg 100-S	0.90
2	Lipocol C	0.50
2	Liposorb S	0.75
2	Propylparaben	0.10
3	Hamosyl C-30	4.00
3	Monawet MO-70R	0.50
4	Liposilt Green	20.00
5	Deionized Water	1.00
5	Unicide U-13	0.30

Procedure:

1. In the main kettle, add water and disperse the Keltrol completely using Lightnin' mixing. When completely hydrated, add remainder of Sequence #1 ingredients in order of addition. Heat to 75C with Lightnin' mixing.
2. In a side kettle, combine Sequence #2 ingredients and heat to 78C with mixing.
3. Add combined Sequence #2 ingredients to combined Sequence #1 ingredients under Lightnin' mixing. Mix for 15 minutes or until emulsification is complete. Cool to 70C.
4. At 70C, add Sequence #3 ingredients with continued Lightnin' mixing. Mix for 10 minutes and continue cooling.
5. At 55-60C or when batch begins to thicken, remove Lightnin' mixer and insert variable speed side-wiper mixing.
6. Cool to 42C and add Sequence #4 ingredients.
7. Cool to 35C and add premixed Sequence #5 ingredients. Cool to 25C and package.

SOURCE: Lipos Chemicals Inc.: Formula No. 674

Lipstick Base

<u>Ingredients:</u>	<u>Wt%</u>
Ross Refined Candelilla Wax	9.1
Isopropyl Myristate	9.6
Lanolin Anhydrous	5.0
Ross White Bleached Beeswax	4.0
Fully Refined Paraffin Wax 130/135	2.0
Ross Ozokerite Wax 77W	2.5
Castor Oil Crystal O	54.7
Ross Refined #1 Yellow Carnauba Wax	1.5
Pigments	7.5
Mineral Oil	4.0
Propyl Paraben	0.1

Procedure:

In kettle (A) heat all the ingredients under agitation except 10% of Castor Oil and the pigments. When blended cool to almost solid and hold. In kettle (B) slurry the 10% of castor oil and the pigments till blended. When both kettles are ready add kettle (A) to kettle (B). Pass thru a 3 roll mill till smooth and cast into molds.

High Melting Point Lipstick

<u>Ingredient:</u>	<u>Wt%</u>
Ozokerite Wax 77W	5.0
Refined Candelilla Wax	11.0
Octyl dodecanol	27.0
C30-45 Alkyl Methicone	5.0
Cyclomethicone	4.8
Petrolatum	3.0
Lanolin Oil	9.0
Avocado Oil	2.0
Oleyl alcohol	8.0
Methylparaben	0.2
Pigment/cyclomethicone	25.0

SOURCE: Frank B. Ross Co., Inc.: Suggested Formulations

Liquid Make-up with Panalane L14E and Ultraresistant Pigments
And Increased Wetting Agents

This product provides an even smooth application with a cushioning effect and moisturization combined with transfer proof and long wear properties of the Ultraresistant Pigments.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	66.02
1	CMC 7H3SF/Cellulose Gum	0.30
1	Veegum/Magnesium Aluminum Silicate	0.40
1	Butylene Glycol	3.75
1	Methylparaben	0.20
2	Lipo Lecithin	0.40
2	Liposorb 0-20/Polysorbate 80	0.10
2	Triethanolamine, 99%	1.13
2	Boron Nitride 6069	2.00
2	Titanium Dioxide UH 0082	8.00
2	Iron Oxide Yellow #C-UR0200	0.40
2	Iron Oxide Red #C-UR1800	0.90
2	Iron Oxide Black #C-UR2500	0.10
3	Lipo GMS-470/Glyceryl Stearate SE	1.00
3	Liponate IPP/Isopropyl Palmitate	2.00
3	Lipo Stearic Acid	2.00
3	Liponate 2DH/PEG-4 Diheptanoate	2.00
3	Panalane L-14E/Hydrogenated Polyisobutene	7.00
3	Emersol 871/Isostearic Acid	1.00
3	Propylparaben	0.20
4	Deionized Water	1.00
4	Unicide U-13/Imidazolidinyl Urea	0.10

Procedure:

1. In main kettle, combine Sequence #1 ingredients under Lightnin' mixing and heat to 60-70C.
2. Add Sequence #2 ingredients to Sequence #1 slowly under Lightnin' mixing.
3. Pass combined Sequence #1 and #2 through colloid mill and recirculate until pigments are evenly dispersed.
4. Transfer the bulk to main kettle and mix under Lightnin' mixer and heat to 80C.
5. In auxiliary kettle, combine Sequence #3 ingredients under Lightnin' mixing and heat to 80-85C.
6. At proper temperature (80-86C) add combined Sequence #3 ingredients to batch (water phase pigment grind) under sweep mixing, maintaining temperature until emulsion is complete. Begin cooling to 40C, switching to slow mixing as batch thickens.
7. At 40C add premixed Sequence #4 ingredients to batch and cool to 30C.
8. Pour the batch into a suitable container.

SOURCE: Lipo Chemicals Inc.: Formula No. 916

Liquid Talc

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
A) Schercemol CO/Cetyl Octanoate	8.40
Keltrol F/Xanthan Gum	0.50
Kelcoloid S/Propylene Glycol Alginate	0.50
Fragrance	0.25
B) Deionized Water	57.55
Non-Fat Dry Milk	1.00
Dowicil 200/Quaternium-15	0.20
C) Emphos D70-30C/Sodium Glyceryl Oleate Phosphate	1.00
Schercemol GMIS/Glyceryl Isostearate	0.30
D) Schercomid AME-70/Acetamide MEA	4.50
Cucumber Extract/Herbasol Extract Cucumber	1.00
Talc 1629/Talc	10.50
SDA 40	14.00
Methylparaben	0.20
Propylparaben	0.10

Procedure:

1. Combine ingredients of Part A until well dispersed.
2. Combine Part B until uniform.
3. Add Part B to Part A on an Eppenbach type homomixer.
4. Combine Part C and add to Parts A & B.
5. Combine Part D and add to the rest of the batch
6. Mix until well dispersed.

Formulation SK 86

Body Silkening Dry Oil

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Dow Corning 344 Fluid/Cyclomethicone	66.0
Schercemol NGDO/Neopentyl Glycol Dioctanoate	16.0
Schercemol CO/Cetyl Octanoate	12.0
Schercemol DIS/Diisopropyl Sebacate	5.0
Fragrance	1.0

Procedure:

Combine ingredients at room temperature. Mix until clear and homogeneous.

Formulation SK 87A

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Low Temperature Flowable Skin Cleanser

<u>Ingredients:</u>	<u>Wt%</u>
Water	19.3
Sodium Chloride	1.0
Sodium Lauryl Sulfate(28%)	35.7
Sodium Laureth-2 Sulfate(26%)	38.5
Promidium CC (PPG-1 Hydroxyethyl Caprylamide)	3.0
Phospholipid PTC (Cocamidopropyl PG-Dimonium Chloride Phosphate)	2.5

Procedure:

Add ingredients in order listed with gentle agitation. Adjust pH to 5.0.

Formulation Properties:

Appearance: Pearly opaque liquid

Viscosity(cP) @ 25C: 900

Activity(%): 26

Formula F-859

Clear Conditioning Silky Body Cleanser

The following formula provides long lasting foam leaving the body feeling fresh, clean and silky smooth.

<u>Ingredients:</u>	<u>Wt%</u>
Water	14.6
Tetrasodium EDTA(40%)	0.3
Sodium Chloride	1.0
Monafax MAP 230T60(60%) (TEA-Cl2-13 Phosphate)	6.7
Sodium Laureth (2) Sulfate (26%)	46.4
Sodium Lauryl Sulfate (28%)	27.0
Promidium CO (PPG-2 Hydroxyethyl Cocamide)	4.0

Procedure:

Blend ingredients in the order listed. Adjust the pH to 5.5. Add fragrance, color and preservative as required.

Typical Properties:

Appearance: Clear Viscous Liquid

Viscosity: 11,000 cP

Total Solids(%): 28.8

Formula F-860

SOURCE: Mona Industries, Inc.: Formulas F-859 and F-860

Make-Up Base

SF1214 is a blend of cyclomethicone and high molecular weight dimethicone. The cyclomethicone acts as an emollient and gives a dry, non-greasy feel. The high molecular weight dimethicone gives a soft, silky feel when applied to the skin. SS4267 is a blend of a low molecular weight dimethicone and a silicone resin which is film-forming and provides a more durable product.

Ingredient/Function:Wt%

Part A:

Cetyl Acetate (and) Acetylated Lanolin Alcohol (1)/Emollient	3.00
Myristyl Myristate/Emollient	2.20
Diethyl Sebacate/Emollient	2.00
Stearyl Alcohol (and) Cetareth-20 (1)/Emulsifier	2.00
Ceteth-10/Emulsifier	0.10
Butylparaben/Preservative	0.10

Part B:

Water	68.35
Magnesium Aluminum Silicate (2)/Thickener	0.50
Xanthan Gum/Suspending agent/Thickener	0.15
Glycerin/Humectant	3.00
Citric Acid/pH adjuster	0.30
Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben (3)/Preservative	0.60

Part C:

Dimethicone (and) Trimethylsiloxysilicate (SS4267)(4)/Film-former	3.00
Cyclomethicone (and) Dimethicone (SF1214) (4)/Soft, silky feel	1.00
Talc/Feel, pigment	5.00
Titanium Dioxide/Pigment	5.00
Iron Oxides/Pigment	3.70

Procedure:

1. Heat Part A and Part B to 75C.
2. Add Part B to Part A with high shear mixing.
3. Cool to 55C and add Part C with good mixing.
4. Continue mixing until cooled to 25C.

Trade Names/Suppliers:

- (1) Lanatex Products Inc.
- (2) Veegum HV, R.T. Vanderbilt Co., Inc.
- (3) Germaben II, International Specialty Products (ISP)
- (4) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CC 102

Mascara Using Avalure UR 450 Polymer
A002

This mascara eyelash makeup cream applies beautifully from an automatic mascara unit containing a brush for application. The urethane polymer (Avalure UR 450 polymer) contributes bulk and adherence to the eyelashes allowing for a long-lasting plump look. It also eliminates the need for any of the other gums such as gum arabic in the product.

INCI-CTFA Name/Trade Name:

	<u>Wt%</u>
Part A:	
1. Deionized Water	59.50
2. Methylparaben	0.10
3. Methocel 40-202	0.20
4. Triethanolamine (99%)	2.80
5. DL-Panthenol	0.50
6. Avalure UR 450 Polymer	6.00
7. PVP-K30	2.00
Part B:	
8. C33-7734 Cosmetic Black/Iron Oxides	10.00
Part C:	
9. Stearic Acid/Emersol 132	5.50
10. Bayberry Wax	1.80
11. Glyceryl Stearate/Protachem GMS-450	1.70
12. Beeswax, White	4.50
13. Carnauba Wax, Prime #1 Yellow, Refined Flakes	2.70
14. WW Gum Rosin	1.80
15. Propylparaben NF	0.10
Part D:	
16. Mirasil SM/Simethicone	0.10
17. Lipovol WGO/Wheat Germ Oil	0.10
18. Phenonip	0.10
19. Germaben II	0.50

Preparation Procedure:

Part A:

1. Add the deionized water to a suitable kettle and begin heating the water to 40C. Add the methylparaben and mix until dissolved.
2. Turn the heat off and add the Methocel. Mix until uniformly dispersed and until no lumps appear.
3. Add the triethanolamine and mix until the gum is hydrated and clear.
4. Add the Panthenol and mix until dissolved.
5. Add the Avalure UR 450 polymer and continue mixing until the mixture is uniform.
6. Add the PVP powder and mix until all of the powder is in the solution and Part A is uniform. Maintain the temperature but raise it to 75C just before combining with Parts B & C.

Parts B&C:

7. Mix all of the ingredients of Part C (oil phase) in a suitable kettle and melt to 75C.
8. When all of Part C has been melted, add the pigment of Part B to it and mix until the pigment is completely wetted and uniform.
9. Continue mixing and begin cooling and at 50C add Simethicone, Wheat Germ Oil and preservatives. Continue cooling to room temperature.

SOURCE: BFGoodrich Specialty Chemicals: Formulation A0002

"Matte-Finish" Make-Up

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
A) Schercemol CO/Cetyl Octanoate	7.0
Schercemol DID/Diisopropyl Dimer Dilinoleate	1.0
Arlacel 60/Sorbitan Monostearate	3.0
Glutamate SSE 20/PEG-20 Methyl Glucose Sesquistearate	3.0
Schercemol GMIS/Glyceryl Isostearate	0.5
Dow Silicone fl. 350 cps	1.0
Escalol 507/Octyl Dimethyl PABA	1.0
B) Veegum (4% aq.)/Magnesium Aluminum Silicate	15.0
Water	55.0
Glycerin	2.0
Germaben II	1.0
C) Pigments:	
Talc 141 BC	2.1
Titanium Dioxide 328	6.4
7055 Iron Oxide Yellow	0.45
7061 Iron Oxide Brown	0.8
7054 Iron Oxide Red	0.25
D) Cucumber Extract	0.50

Procedure:**Phase B:**

1. Disperse Veegum slurry in water until uniform.
2. Add the rest of the water phase, mixing well.

Phase C: Mix Phase C:

3. Add Phase C to Phase B and mix for 5 minutes or until fully dispersed. In main beaker mix ingredients of Phase A. Heat both Phases A and Phase B & C to 70C. Add Phase B, C to A with moderate agitation. Cool batch to room temperature with continuous mixing, then add Phase D.

Formulation SK 147

"Matte-Finish" Emollient Make-Up**Formula for Lotion**

<u>Part A: Ingredients/CTFA Name:</u>	<u>Wt%</u>
Stearic Acid	2.70
Schercemol GMIS/Glyceryl Isostearate	2.00
Schercemol DISD/Diisostearyl Dimer Dilinoleate	5.00
Schercemol IDO/Isodecyl Oleate	4.50
Cetyl Alcohol	0.75
Part B:	
Propylene Glycol	4.50
Triethanolamine	0.90
Water	79.65
Preservative	q.s.

Procedure:

Add Part B to Part A at 80C, mixing slowly. Cool to room temp.

Formula for Make-Up

Lotion	90.00
Pigment Blend	10.00

Procedure:

Slowly add lotion to pigment blend (which has been micronized) in increments to make a paste. Continue to add lotion until a fluid homogeneous emulsion is formed.

Formulation SK 138

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Moisturiser with UV-Protection

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Octyl Palmitate	3.000
2	AEC Diisostearyl Trimethylolpropane Siloxy Silicate	1.500
3	Amphisol K	0.500
4	AEC Hydroxyoctacosanyl Hydroxystearate	3.000
5	Vitamin E Acetate	1.000
Aqueous Phase:		
6	Water; Pure	73.100
7	Xanthan Gum	0.200
8	Veegum Ultra	0.800
9	Glycerine BP	5.000
10	Arlatone 2121	3.000
11	D-Panthenol USP	1.000
12	Tioveil AQ N	6.000
13	Sodium PCA	1.000
14	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
15	Fragrance	0.400
Formula Ref.: 387*		

Moisturiser with UV Protection

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Octyl Palmitate	5.000
2	Cetearyl Octanoate	5.000
3	AEC Dimethicone V100	1.000
4	Beeswax; White Pellets	4.000
Aqueous Phase:		
5	Water; Pure	65.600
6	Xanthan Gum	0.200
7	Veegum Ultra	2.000
8	Propylene Glycol USP	5.000
9	Arlatone 2121	5.000
10	Sodium Lactate 60%	0.300
11	Lactic Acid	0.100
12	Tioveil AQ N	6.000
13	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
14	Fragrance	0.300

Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring, only use a Silverson briefly to form an emulsion at start and to homogenise at finish, use a slow speed mixer while cooling.

pH: 5.3-6.5

Formula Ref.: 399*

SOURCE: A&E Connock Ltd.: Suggested Formulations

Moisturiser with UV Protection

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Caprylic/Capric Triglyceride	5.000
2	AEC Dimethicone V100	1.000
3	Cetearyl Alcohol	1.000
4	GMS NSE	5.000
5	Amphisol K	2.000
Aqueous Phase:		
6	Water; Pure	71.600
7	Veegum Ultra	2.000
8	Propylene Glycol USP	5.000
9	Sodium PCA	0.500
10	Lactic Acid	0.100
11	Tioveil AQ N	6.000
12	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
13	Fragrance	0.300

Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring, only use a Silverson briefly to form an emulsion at start and to homogenise at finish, use a slow speed mixer while cooling. pH: 6.0-6.5

Formula Ref.: 400*

Moisture Lotion

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Light Mineral Oil	7.000
2	Superhartolan	2.000
3	AEC Dimethicone V100	1.200
4	Amerchol L101	3.000
5	Stearic Acid-Triple Pressed	5.000
Aqueous Phase:		
6	Water; Pure	74.284
7	Glycerine BP	3.000
8	Carbopol 934	0.166
9	Triethanolamine 99%	2.500
10	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
11	Fragrance	0.350

Mixing Instructions:

This is an oil-in-water emulsion.

Heat the Oil Phase to 70/75C and mix well, ensure all waxes are melted.

Heat the Aqueous Phase to 70/75C, carefully dispersing the Carbopol and mix well.

Carefully add the hot oil phase to the hot aqueous phase with mixing.

Cool with continual slow mixing, when below 35C add the fragrance and homogenise.

Formula Ref.: 536*

SOURCE: A&E Connock Ltd.: Suggested Formulations

Moisturizing Eye Gel

A clear gel to be used around the eyes to smooth the skin and give a soft, silky feel.

<u>Ingredients/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	88.64
Disodium EDTA/Chelating agent	0.03
Citric Acid(10% solution)/pH adjustment	0.03
Carbomer(1)/Gelling agent	0.40
Part B:	
1,3 Butylene Glycol/Humectant	2.00
Glycerin(96%)/Humectant	3.50
Panthenol/Moisturizer/Provitamin B	0.30
Part C:	
Phenyl Trimethicone(SF1550)(2)/Non-oily emollient	0.35
Cyclopentasiloxane (and) Dimethicone(SF1214)(2)/ Breathable barrier, smooth, silky feel	3.00
Part D:	
Sodium Hydroxide(10% solution)/Neutralizer	1.60
Part E:	
DMDM Hydantoin (and) Iodopropynyl Butylcarbamate/ Preservative	0.15

Procedure:

1. Meter water of Part A into appropriate vessel. Add EDTA and citric acid to the water and mix with propeller agitation until dissolved. With moderate propeller agitation, slowly add carbomer and when dissolved, mix an additional 20 minutes.
2. Add ingredients of Part B to Part A with moderate propeller agitation.
3. Add Part C to Part AB in order listed with moderate propeller agitation. Mix 20-30 minutes with moderate agitation.
4. Add Part D to batch with sweep agitation and adjust pH to 7.2+-0.1.
5. With sweep agitation, add Part E and mix for 30 minutes.

Trade Names/Suppliers:

- (1) Carbopol ETD 2001, B.F. Goodrich Co.
- (2) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 115

Moisturizing Frosted Lipstick

This lipstick goes on smoothly and has an excellent skin feel. It is very long-lasting, and petrolatum adds superior moisturizing characteristics.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Castor Oil	51.99
Mica (and) Titanium Dioxide/Timiron MP-1001	4.44
Titanium Dioxide/Micro LA 20	0.89
FD&C Red #40 Aluminum Lake	1.77
D&C Red #27 Aluminum Lake	1.77
Mica (and) Titanium Dioxide (and) D&C Red No. 30/ Colorona Imperial Red	1.77
B: Stearyl Alcohol	10.08
Candelilla Wax	7.81
Mineral Oil/Drakeol 21	6.21
Beeswax (and) Candelilla Wax (and) Hydrogenated Soy Glyceride (and) Paraffin (and) Carnauba (and) Stearic Acid/Isobeeswax SP 154	3.55
Amber Petrolatum	2.66
Ozokerite Wax White SP 1020	2.48
Carnauba Wax SP 63	0.89
Cetyl Acetate/Pelemol CA	0.89
Isopropyl Palmitate	0.89
Acetylated Lanolin/Modulan	0.71
Wheat Germ Oil/Super Refined Wheat Germ Oil	0.44
Propylparaben	0.09
BHT	0.05
C: Fragrance	0.62
Homogenize part A until uniform. Heat part B to 60C with stirring. Add part A. Heat to 80C with stirring until the solids are melted. Cool to 75C. Add fragrance. Pour into molds.	
Formula 597-70	

Lip Balm with Sunscreen

The high petrolatum level in this lip balm provides smooth application and helps prevent chapped lips. The sunscreen gives light UV protection.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
Petrolatum/Amber Petrolatum	44.00
Octyldodecyl Stearoyl Stearate/Ceraphyl 847	20.00
Beeswax (and) Candelilla Wax (and) Hydrogenated Soy Glyceride (and) Paraffin (and) Carnauba (and) Stearic Acid/Isobeeswax SP 154	10.00
Ozokerite Wax White SP 1020	8.70
Candelilla Wax	6.00
Stearyl Alcohol	5.00
Carnauba Wax SP 63	2.00
Mineral Oil/Drakeol 9	2.00
Octyl Methoxycinnamate/Parsol MCX	2.00
Butylparaben	0.20
BHT	0.10

Heat all ingredients to 80C with stirring until melted. Pour into molds and allow to cool.

Formula 597-83

SOURCE: Penreco: Suggested Formulations

Night Time MoisturizerConcept Statement:

Lactylate based emulsion containing Ritasil 190 as a lubricant

<u>Ingredients/Function:</u>	<u>Wt%</u>
1. Pationic SCL (Sodium Cocoyl Lactylate)/Lactylate	0.70
2. Rita Cetearyl Alcohol 50/50 (Cetearyl Alcohol)/ Emulsifier	3.00
3. Rita GMS (Glyceryl Stearate)/Emulsifier	3.00
4. Mineral Oil/Emollient	10.00
5. Rita IPP (Isopropyl Palmitate)/Emollient	2.00
6. Ritalan (Lanolin Oil)/Emollient	0.50
7. Ritasil 190 (Dimethicone Copolyol)/Lubricant	1.00
8. Distilled/Deionized Water	78.45
9. Acritamer 941 (Carbomer)/Thickener	0.15
10. Germaben IIE/Preservative	1.00
11. TEA/Neutralizer	q.s.
12. Fragrance/Odor	0.20

Compounding Procedure:

Slowly disperse item 9 in item 8. Add item 11 to adjust pH to 6.5-7.5 and heat to 80C. Separately combine items 1 to 7 and heat to 80C. Add oil phase to water phase. Cool to 40C. Add items 10 and 12.

LI Ref. No. 124-45

Aloe Vera MoisturizerConcept Statement:

Excellent feel, containing Ritaloe and Pationic SBL for skin conditioning.

<u>Ingredients/Function:</u>	<u>Wt%</u>
1. Pationic SBL (Sodium Behenyl Lactylate)/Lactylate	1.56
2. Rita Cetearyl Alcohol 50/50 (Cetearyl Alcohol)/ Emulsifier	2.00
3. Rita GMS (Glyceryl Stearate)/Emulsifier	4.00
4. Ritachol (Mineral Oil and Lanolin Alcohol)/Emollient	2.00
5. Lanolin USP X-Tra Deo/Emollient	0.50
6. Mineral Oil/Emollient	8.00
7. Ritasol (Isopropyl Lanolate)/Emollient	1.00
8. Ritaceti (Cetyl Esters)/Emollient	1.00
9. Propylparaben/Preservative	0.10
10. Distilled/Deionized Water	73.44
11. Propylene Glycol/Humectant	5.00
12. Ritaloe 200M (Aloe Vera Gel)/Moisturizer	1.00
13. Methylparaben/Preservative	0.20
14. DMDM Hydantoin/Preservative	0.20

Compounding Procedure:

Combine items 1 to 9 and heat to 80C. Combine items 10 to 13 and heat to 80C. Add oil phase to water phase with agitation. Cool to 40C. Add item 14.

LI Ref. No. 124-54

SOURCE: R.I.T.A. Corp.: Facial Care Formulas

O/W-Skin Milk
Manufacturing at room temperature

Recipe:

	<u>Wt%</u>
A Hostaphat KL 340 N/Trilaureth-4 Phosphate	3.00
Mineral oil, high viscosity	10.00
Isopropyl palmitate	5.00
B Carbopol 980/Carbomer	0.45
C Glycerin	3.00
Caustic soda solution (10%)	1.80
Water	76.45
Preservative	q.s.
D Fragrance	0.30

Procedure:

1. Mix A and B, then stir in C.
2. Add D to 1.
3. Homogenize the emulsion.

Formula A VI/1101

O/W-Skin Milk
Manufacturing at room temperature

Recipe:

	<u>Wt%</u>
A Hostaphat KL 340 N/Trilaureth-4 Phosphate	1.50
Hostacerin DGI/Polyglyceryl-2 Sesquiisostearate	2.00
Mineral oil, low viscosity	8.00
Isopropyl palmitate	6.00
Cetiol 868/Octyl Stearate	5.00
B Carbopol 980/Carbomer	0.40
C Caustic soda solution (10%)	1.60
Water	75.20
Preservative	q.s.
D Fragrance	0.30

Procedure:

1. Mix A and B, then add C and stir well.
2. Add D to 1 while stirring.
3. Finally homogenize the emulsion.

Formula A VI/1118

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

O/W-Skinmilk

contains no ethylene oxide, manufacturing at room temperature

<u>Recipe:</u>	<u>Wt%</u>
A Hostaphat CG 120/Isostearyl Phosphate	3.00
Mineral oil, low viscosity	4.00
Cetiol SN/Cetearyl Isononanoate	4.00
Cetiol 868/Octyl Stearate	4.00
D-Panthenol	1.00
DL-Tocopherol acetate	1.00
B Carbopol 980/Carbomer	0.40
C Water	73.55
Glycerine	5.00
Caustic soda solution (10%)	3.10
Allantoin	0.30
Citric acid (10%)	0.25
Aquamollin BC highly conc. Pwd./Ethylenediamine	
Tetraacetic Acid Sodium Salt	0.10
Preservative	q.s.
D Fragrance	0.30

Procedure:

1. Add B to A.
2. Stir C into 1.
3. Stir D into 2.
4. Homogenize the emulsion.

SOURCE: Hoechst Aktiengesellschaft: Formula A VI/1000

Moisturizing Beauty Fluid

This smooth, very light lotion leaves the skin feeling moisturized without being oily

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A Deionized Water	78.70
Glycerin	3.00
Hydroxyethylcellulose	0.50
Methylparaben	0.20
B Mineral Oil/Drakeol 7	4.00
Octyldodecanol Neopentanoate/Elefac I-205	4.00
Glyceryl Stearate/Kessco Glyceryl Monostearate	3.50
PEG-40 Stearate/Myrj 52S	2.00
Cetearyl Alcohol (and) Ceteareth-20/Lipowax D	1.50
Cetyl Alcohol/Lanette 16	1.00
Meadowfoam Seed Oil	1.00
Propylparaben	0.10
C Glycerin (and) Lecithin (and) Palmitoyl Myristyl	
Serinate/Dermacide	1.00
D Diazolidinyl Urea/Germall II	0.20
Fragrance	q.s.

Procedure:

Heat part A to 75C with stirring. Heat part B to 80C with stirring. Add part C to hot B with stirring and, when dissolved, add this blend to part A with mixing. Continue stirring while allowing the mixture to cool. At 40C, add part D. Continue stirring to 30C.

SOURCE: Penreco: Suggested Formulation

Pan Foundation

<u>Material:</u>	<u>Wt%</u>
1 Part A:	
2 PPG-2 Myristyl Ether Propionate	44.50
3 Talc	15.61
4 Pigments	13.94
5 Part B:	
6 Unitwix	15.06
7 Super Refined Almond Oil	7.08
8 Stearic Acid	2.96
9 Cab-O-Sil M5	0.75
10 Fragrance	0.05
11 Propylparaben	0.05

Procedure:

1. Premix the pigments, talc and titanium dioxide of part A.
2. Add the pigment blend to the PPG-2 Myristyl Ether Propionate while mixing with a low shear propeller blade at moderate speed.
3. In a separate vessel weigh out the Unitwix and the Cab-O-Sil M5. Heat gently with stirring to melt the Unitwix.
4. When the Unitwix is melted add the pigment blend and the Super Refined Almond Oil and mix while heating to 80-85C.
5. Slowly add the remaining components.
6. When well blended remove the heat and cool with mixing to 55C. Pour into desired containers.

Formulation 97048-P

Moisturizing Face Wash

This unique face-wash formulation is based on the ability of Lubrajel DV to provide significant moisturization as well as body. The cleansing properties are provided by the sodium laureth sulfate and Polysorbate 20. This product is characterized by its low foaming, creamy body and its pleasant, but light fragrance.

<u>Material:</u>	<u>Wt%</u>
A Lubrajel DV	61.70
B Deionized Water	30.54
C Sodium Laureth Sulfate (28%)	7.50
D Polysorbate 20	0.25
E Fragrance	0.01

Procedure:

1. Using a paddle blade, mix components A and B.
2. With very slow mixing, add component C.
3. Premix components D and E before adding to step 2. Mix until homogeneous.
4. Package.

Formulation #92037-V

SOURCE: Guardian Laboratories: Suggested Formulations

Pearlized Body Cleanser

The following formula provides copious, well lubricated lather, excellent cleansing and a smooth afterfeel to the skin.

<u>Ingredients:</u>	<u>Wt%</u>
Ammonium Lauryl Sulfate (28% active)	46.4
Ammonium Xylene Sulfonate (40% active)	2.5
Water	13.1
Ammonium Lauryl Ether (2) Sulfate (26% active)	27.0
Promidium SY (PPG-3 Hydroxyethyl Soyamide)	4.0
Monateric CLV (Disodium Cocoamphodiacetate)	4.0
Phospholipid EFA (Linoleamidopropyl PG-Dimonium Chloride Phosphate)	2.0
Glycol Distearate	1.0

Procedure:

Mix ingredients in order listed. Heat to 65-70C to blend the Glycol Distearate into the mixture. Cool to 40-45C. Add color, fragrance and preservative as required. Package.

Appearance: Pearled lotion

Viscosity (cP) @ 25C: 5,000

Krafft Point: 10C

Formula F-849

Moisturizing Body Wash

<u>Ingredients:</u>	<u>Wt%</u>
Di Water	31.1
Monafax MAP 230	20.5
Ammonium Laureth Sulfate (2)	30.9
Monateric CLV	9.5
Pricerine 9083	5.0
Phospholipid SV	3.0

Procedure:

Add water, Monafax MAP 230, Ammonium Laureth Sulfate, Monateric CLV and Pricerine 9083 with agitation. Heat ingredients to 50-55C, add Phospholipid SV and mix until uniform. Stir cool to 30-35C, add preservative. Adjust pH with 50% Citric Acid to 6.3-6.5.

Citric Acid 50%: 1.1

Typical Properties:

pH: 6.41

Viscosity: 3,500 cP

Krafft Point: 17C

Freeze/Thaw: Passed

Solids: 26.3%

Appearance: Clear Liquid

Formula F-839

SOURCE: Mona Industries, Inc.: Formula F-849 and F-839

Powder to Cream Make-Up

This stick application make-up provides a creamy, long wear, silky feel to the skin.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Panalane L-14E/Hydrogenated Polysiobutene	36.20
1	Liponate 2DH/PEG-4 Diheptanoate	6.00
1	Carnauba Wax	6.50
1	Candelilla Wax	2.00
1	Liponate PS-4/Pentaerythrityl Tetrastearate	4.00
1	Lipo Lecithin	1.00
2	Ultra Talc #4006	16.00
2	Kaolin USP BC	8.00
2	Titanium Dioxide #3228	8.00
2	Iron Oxide Red	1.00
2	Iron Oxide Yellow	0.80
2	Iron Oxide Black	0.10
2	Lipomic 601 BN/Mica (and) Boron Nitride	10.00
2	Propylparaben	0.25
2	Methylparaben	0.15

Procedure:

1. In main kettle, combine Sequence #1 ingredients under Light-nin' mixing and heat to 80-85C.
2. Blend Sequence #2 ingredients separately in a blender and add to Sequence #1. Mix until uniformly dispersed. Cool to 75-80C.
3. At 75-80C pour batch into a suitable container for molding.

SOURCE: Lipo Chemicals Inc.: Formula No. 1001

Powder Eye Shadow with Superior Feel

Tospearl 130A is a fine particle silicone resin. The sub-micron spherical particles act as "ball bearings" providing superior slip and lubricity. Tospearl provides a smooth, silky feel, reduces pigment/powder agglomeration and enhances the color of cosmetic products.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Mica (and) Titanium Dioxide/Pigment	6.4
Mica/Pigment	32.0
Iron Oxides/Pigment	3.0
Ultramarine/Pigment	12.7
Iron Blue/Pigment	18.9
Part B:	
Polymethylsilsesquioxane (Tospearl 130A)(1)/ Slip/ Lubricity/Smooth, silky feel	19.5
Part C:	
Dimethicone [SF96 (5)] (1)/Emollient	2.5
Squalene/Moisturizer	2.5
Petrolatum/Moisturizer	2.5
Fragrance	q.s.
Preservative	q.s.

Procedure:

1. Mix pigments in Part A except titanium dioxide and mica.
2. Add the titanium dioxide, mica, Part C (fragrance and preservative), and Part B to Part A with high shear mixing.
Add the fragrance and preservative with the same high shear mixing.
3. Press into suitable containers.

Trade Names/Suppliers:

(1) GE Silicones

Formula CC 106

Smooth, Silky Eye Shadow

A formulation using SF1214 to provide slip and spreadability. It gives a smooth, velvety feel, reduces creasing and provides durability.

Ingredient/Function:

	<u>Wt%</u>
Mica (and) Iron Oxides (and) Titanium Dioxide (1)/Pigment	40.5
Talc/Powder Base	32.4
Cyclomethicone (and) Dimethicone (SF1214) (2)/Smooth, silky feel	13.6
Oleyl Erucate/Waxy emollient	13.5

Procedure:

1. Mill through a 0.027" herringbone screen.
2. Press into a suitable container.

Trade Names/Suppliers:

(1) Timica Golden Bronze, Mearl Corp.

(2) GE Silicones

Formula CC 105

SOURCE: GE Silicones: Personal Care Formulary

Powder Foundation With Smooth, Silky Feel

Tospearl 130A is a fine particle silicone resin. The sub-micron spherical particles act as "ball bearings" providing superior slip and lubricity. Tospearl provides a smooth, silky feel, reduces pigment/powder agglomeration and enhances the color of cosmetic products.

<u>Ingredient:</u>	<u>Wt%</u>
Part A:	
Talc	6.6
Titanium Dioxide/Pigment	19.2
Mica (and) Titanium Dioxide/Pigment	4.8
Iron Oxides/Pigment	11.2
Zinc Oxide/Pigment	6.2
Barium Sulfate/Pigment	13.7
Part B:	
Dimethicone [SF96 (5)] (1)/Emollient	5.5
Lanolin/Emollient	8.2
Petrolatum/Moisturizer	1.4
Liquid Petrolatum/Emollient	1.4
Isopropyl Myristate/Emollient	1.4
Part C:	
Polymethylsilsesquioxane (Tospearl 130A) (1)/Slip/ Lubricity/Smooth, silky feel	20.4
Part D:	
Fragrance	q.s.
Preservative	q.s.

Procedure:

1. Mill all of the pigments in Part A together.
2. Add Part B, Part C, and Part D to Part A with high shear mixing.
3. Press into suitable containers.

Trade Names/Suppliers:

(1) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CC 103

Pressed Powder Makeup

This pressed powder makeup formulation exhibits excellent pay-off and exceptional strength as compared to the same formulation which contains mineral oil and sorbitan diisostearate (2.5% each) in place of the Lubrajel Oil.

<u>Material:</u>	<u>Wt%</u>
A Mearl Talc TCA	36.60
B Zinc Stearate	11.00
C Shinju 100T White	11.00
D Mearl Mica SVA	8.00
E Mearlite GBU	5.00
F Flamenco Ultrasilk 2500	10.00
G Titanium Dioxide	2.00
H D&C Red #6 Barium Lake	3.40
I FD&C Yellow #5 Aluminum Lake	2.00
J Lubrajel Oil	5.00
K Cloisone Super Gold	6.00

Procedure:

1. Components #1-#9 were combined and blended in a roller mill until uniform. This was labeled as Phase "A".
2. Component #10 was added in several portions to Phase "A" with blending in-between additions.
3. Component #11 then added and milling continued until uniform.
4. Powders were pressed to 1000 PSI using a Carver Press.

Lipstick

<u>Materials:</u>	<u>Wt%</u>
1 Lanolin Oil	4.91
2 Oleyl Alcohol	29.48
3 Super Sterol Ester (Croda)	7.37
4 Paraffin Wax 160/165	2.46
5 Unitwix	19.66
6 Fragrance	0.25
7 Castor Oil	21.62
8 Pigment Blend	14.25

Procedure:

Mill the pigment blend in the castor oil. Combine the remaining ingredients with mixing and heat to 80-85C. Add the pigment/castor oil blend to the remaining ingredients with mixing and cool to desired fill temperature and mold.

Formulation 97048-R and 97048-S

SOURCE: Guardian Laboratories: Suggested Formulations

Regenerative Gel (Preregen)

This clear, solid gel is suitable for intensive treatment of tired or slightly damaged skin. Preregen restores the elasticity of the skin.

<u>Item:</u>	<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
1	A)Deionized Water	79.50
2	Glycerin	3.00
3	Phenonip	0.30
4	Imidazolidinyl Urea	0.20
5	Glucam P-10/PPG-10 Methyl Glucose Ether	4.00
6	Carbopol Ultrez 10/Carbomer	1.00
7	B)Deionized Water	5.00
8	Triethanolamine	1.00
9	C)Preregen/Soybean (Glycine Soya) Protein, Oxido Reductases	5.00
10	D)Solubilizer S12/Noxoxynol-14	0.80
11	Fragrance/Parfex 52255	0.20

Procedure:

Dissolve items 2-6 in water (1).

For thickening and neutralization add phase B).

Add item 9 to the gel and finally incorporate phase D).

Application No. D 037.0/08.96

Lip Gloss (Cerasol/Hyasol-BT)

This lip gloss contains Cerasol to strengthen the barrier function and Hyasol-BT to add a pleasant feel and moisturizing activity to the formulation. The obtained white wax is therefore suitable for damaged and sensitive lips.

<u>Item:</u>	<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
1	A)Cutina LM	60.00
2	Miglyol 812/Caprylic/Capric Triglyceride	23.00
3	Cerasol	3.00
4	Eusolex 6300/4-Methylbenzylidene Camphor	1.00
5	Parsol 1789/Butyl Methoxydibenzoylmethane	1.00
6	B)Arlamol 801	7.00
7	Hyasol-BT/Sodium Hyaluronate	5.00

Procedure:

Heat the ingredients of phase A) to 70C.

Heat the ingredients of phase B) to 75C.

Under stirring add phase B) to phase A) and stir until mass becomes solid.

Application No. X 001.A/12.97

SOURCE: Pentapharm Ltd.: Suggested Formulations

Sand Beige Makeup (Oil-Free)

This formulation utilizes Eastman AQ55S polymer to improve wearability and water resistance while aiding pigment dispersion.

<u>Formula:</u>	<u>Wt%</u>
Part A:	
Distilled Water	58.44-60.44
Eastman AQ55S Polymer	2.00- 4.00
Veegum (Magnesium Aluminum Silicate)	1.00
Cellulose Gum (Na CMC)	0.25
Propylene Glycol	8.00
Carbowax PEG 200	1.00
Triethanolamine 99%	0.90
Trisodium EDTA	0.20

Part B:	
Talc, Lo-Micron	5.00
Titanium Dioxide 3328	5.32
Iron Oxide, Red C33-8075	0.32
Iron Oxide, Yellow C33-8073	0.64
Iron Oxide, Black C33-134	0.13

Part C:	
Dow Corning 3225C	9.00
Stearic Acid	1.80
Polawax, NF	1.00
Myverol 18-06 Monoglyceride	2.00
Polysorbate 60	1.00

Part D:	
Preservative	q.s.

Procedure:Part A:

Heat water to 80C. Slowly sift Eastman AQ55S polymer into water with continuous stirring. Dispersion should be complete in 20-30 minutes.

Slowly sprinkle in Veegum and cellulose gum. Mix at maximum available shear until uniform.

Add remaining Part A ingredients and mix well.

Part B:

Combine and mix ingredients until homogeneous.

Add Part B to Part A with mixing. Maintain temperature at 80C.

Part C:

Combine ingredients and heat with mixing to 80C.

Add Part C to Parts A+B. Mix while cooling.

Part D:

At 40C, add Part D and mix until uniform.

SOURCE: Eastman Chemical Co.: Formulation X22001-200

Silk Cleansing Foam

<u>Raw Materials:</u>	<u>Wt%</u>
A Phase:	
Solulan 75	3.0
Myristic acid	15.0
Stearic acid, XXX	11.0
Hydrogenated beef tallow	3.0
Lauric acid isopropanolamide	5.0
Propyl paraben	0.1
B Phase:	
TEA-lauryl sulfate (50% aq. Soln)	15.0
Na-Lauroyl sarcosinate (30% aq. Soln.)	17.0
Glucam E-20	5.0
Propylene glycol	5.0
Silkpro	2.0
KOH	5.0
Water	13.8
Methyl paraben	0.1

Procedure:

Add the B phase at 85C to the A phase at 85C, while stirring. Continue mixing and cool to 30C. Dissolve A phase at 85C and continue stirring to 70C. Add B phase at 70C to A phase. Add C phase at 70C to (A+B) phase. Continue mixing and cool to 30C.

Silky Makeup Base

<u>Raw Materials:</u>	<u>Wt%</u>
Silk Concentrate:	
Silkall 100	5.0
Pigments	10.0
Span 60	2.5
Isopropyl palmitate	2.0
A Phase:	
Stearic acid, XXX	15.0
B Phase:	
Tween 60	1.5
Propylene glycol	10.0
Water	54.0
Perfume and Preservatives	q.s.

Procedure:

Prepare silk concentrate using sufficient mixing and grinding to produce a fine dispersion. Heat the phase A to 85C. Add silk concentrate to the phase A with mixing. Heat the phase B to 85C. Add the phase B to silk concentrate at 85C and continue mixing to the room temperature.

SOURCE: Polyester Corp.: Suggested Formulations

Silk Moisturizing Makeup

<u>Raw Materials:</u>	<u>Wt%</u>
Silk Concentrate:	
Silkall 100	2.0
Titanium dioxide, U.S.P.	0.5
Pigments	4.5
A Phase:	
Amerchol L-101	2.0
Ohlan	1.0
Mineral oil, 70 vis.	10.0
Silicone fluid	10.0
Stearic acid, XXX	15.0
Triethanolamine	4.0
B Phase:	
Propylene glycol	5.0
Water	46.0
Perfume and Preservatives	q.s.

Procedure:

Prepare silk concentrate using sufficient mixing and grinding to produce a fine dispersion. Heat the phase A to 85C. Add silk concentrate to the phase A with mixing. Heat the phase B to 85C. Add the phase B to silk concentrate at 85C and continue mixing to the room temperature.

Compact Rouge

<u>Raw Materials:</u>	<u>Wt%</u>
Silkall 100	5.0
Talc	77.1
Titanium dioxide	5.0
Color	2.7
Perfume	0.2
Emulsion binder	10.0
(Formula for binder):	
Light mineral oil	25.0
Sorbitan sesquioleate	10.0
Water	64.8
Methyl paraben	0.1
Propyl paraben	0.1

Procedure:

This binder is manufactured according to the procedure for making a good emulsion. It is rather unstable and should be mixed well before staying into rouge. Mix all ingredients until uniform.

SOURCE: Polyester Corp.: Suggested Formulations

Silk Translucent Pressed Powder

<u>Raw Materials:</u>	<u>Wt%</u>
Acetulan	1.0
Zinc stearate	6.0
Kaolin	2.0
Talc	46.8
Silkall 100	20.0
Titanium dioxide coated mica	10.0
Pigments	12.0
Propyl paraben	0.1
Methyl paraben	0.1

Procedure:

Mix all ingredients except Acetulan in a blender. Spray or add Acetulan binder. Micronize, then press.

Liquid Silk Foundation

<u>Raw Materials:</u>	<u>Wt%</u>
A Phase:	
Glyceryl monostearate, s.e.	1.0
Stearic acid, xxx	2.5
Lanogene	3.0
Span 80	0.8
Isopropyl myristate	5.0
Amerchol L-101	3.0
Silicone 200, 350 cstks.	0.8
Solulan 98	2.0
Squalane	6.0
Promulgen D	2.0
Silkall 100	2.0
Pigments	8.0
Propyl paraben	0.1

B Phase:

Super refined Bentonite (4% aq. Soln.)	25.0
Sodium carboxy methyl cellulose (2% aq. Soln.)	15.0
Triethanolamine	1.2
Propylene glycol	5.0
Water	17.5
Methyl paraben	0.1

SOURCE: Polyesther Corp.: Suggested Formulations

Silky Cake Eyeshadow

<u>Raw Materials:</u>	<u>Wt%</u>
Silk concentrate:	
Titanium dioxide coated mica	34.8
Silkall 100	20.0
Talc	5.0
Kaolin	9.0
Zinc stearate	8.0
Color	15.0
Binder:	
Isopropyl myristate	5.5
Acetulan	2.5
Propyl paraben	0.2

Procedure:

Mix the silk concentrate until uniform. And add the binder to silk concentrate, mix well, micronize then press.

Silky Lipstick

<u>Raw Materials:</u>	<u>Wt%</u>
Candelilla wax	5.0
Beeswax	2.0
Microcrystalline wax (m.p. 78.4C)	8.0
Carnauba wax	2.5
Amerlate P	5.0
Isopropyl myristate	10.0
Oleyl alcohol	21.0
Amerchol L-101	5.0
Propyl paraben	0.2
Silkall 100	2.0
Color	5.0
Castor oil	23.3
Perfume	1.0
Titanium dioxide coated mica	10.0

Procedure:

In a suitable steam jacketed stainless steel mixing kettle, add first 12 ingredients in order listed and heat to 85C, cool to 65C. Pass through three-roller mill. Place mass back into mixer, reheat to 85C. Admix the last two ingredients. Cool to 70-75C. Mold, wrap and label.

SOURCE: Polyester Corp.: Suggested Formulations

Skin Gel(O/W)
with ASC III

Raw Materials:

	Wt%
A Almond oil (Sweet Almond (Prunus Amygdalus Dulcis) Oil	7.00
Miglyol 812 neutral oil (Caprylic/Capric Triglyceride)	4.00
Oxynex K liquid (Art. No. 108324) (PEG-8 (and) Toco- pherol (and) Ascorbyl Palmitate (and) Ascorbic Acid (and) Citric Acid)	0.50
Luvitol EHO (Cetearyl Octanoate)	4.50
Eutanol G (Octyldodecanol)	5.00
Cetiol V (Decyl Oleate)	5.00
B Sorbitol F liquid (Art. No. 102993)	4.00
Tris(hydroxymethyl)-aminomethane (Art. No. 108386) (Tromethamine)	0.40
Preservatives	q.s
Water, demineralized	ad 100.00
C Pemulen TR-1 (Acrylates/C10-30 Alkyl Acrylate Cross- polymer)	0.40
Water, demineralized	29.60
D ASC III (Art. No. 110154) (Lecithin (and) Dipalmitoyl Hydroxyproline (and) Beta-Sito-Sterol (and) Linoleic Acid (and) Tocopherol (and) Sodium Ascobate (and) Mannitol)	4.00

Procedure:

Disperse the Pemulen TR-1 in the water of phase C and let swell. Incorporate phase B into phase C while homogenizing. Dissolve phase A and add small amounts to phases B/C during homogenization. Add phase D and homogenize again.

Note:

pH23C=6.3

Viscosity 21,000 mPas (Brookfield RVT, spindle C, 5 rpm) @ 23C

Samples contain as preservatives:

0.05% Propyl-4-hydroxybenzoate (Merck Art. No. 107427)

0.15% Methyl-4-hydroxybenzoate (Merck Art. No. 106757)

SOURCE: Rona-Merck: Formulation 14-37/G

Skin Lightening Emulsion

The light emulsion associates 2 skin lighteners: Purac BF P/41 and Dermacare HS plus botanical betaglucans or a good skin-lightening effect.

<u>Ingredient:</u>	<u>Wt%</u>
A. Glyceryl stearate (and) PEG-100 stearate	1.50
Glyceryl stearate (and) ceteth-20	1.50
Cetyl alcohol	3.00
Cetearyl isononanoate	2.00
Cyclomethicone	9.00
Dimethicone	2.00
Preservative	0.35
A. Water (aqua), deionized	qs to 100.00
Preservative	qs
Titanium dioxide	4.00
Xanthan gum	0.30
Magnesium aluminum silicate	1.50
A. Purasal S/PF 60 (Sodium lactate)	8-9.5
Purac PH 90 (Lactic acid)	0.5-2 to required pH
Dermawhite HS (Laboratories Serobiologiques)	2.00
A. Cassia augustifolia seed polysaccharides (Indinyl CA)	3.00
B. Fragrance (parfum)	0.40

Procedure:

Prepare A and B separately at 75 degrees Celsius under turbine stirring. Add A into B under turbine stirring. Follow stirring, and cool to 60 degrees Celsius. At 60 degrees Celsius stop the turbine and follow stirring with planetary. At 50 degrees Celsius, add C and D. At 40 degrees Celsius, add E. Cool to room temperature.

Formula from Laboratories Serobiologiques

Anti Acne Cleansing
Moisturising Anti-Acne Cream

<u>Ingredient:</u>	<u>Wt%</u>
Mineral oil (25 cS at 25C)	10.00
Polawax GP200 (Nonionic emulsifying wax)	8.00
GMS A/S (Glyceryl stearate (and) PEG-100)	4.00
Crodamol IPM (Isopropyl Myristate)	3.00
Silicone 200/100 (Dimethicone)	1.00
Parsol MCX (Octyl methoxycinnamate)	1.50
Water deionised	to 100
Croderol GA 7000 (glycerin)	4.00
Purasal S/PF 90	8-18
Purac PH 90	0.08-0.23
Tocopherol acetate	0.5
Perfume. Preservative, Colour	qs

Croda Formulation

SOURCE: Purac America Inc.: Suggested Formulations

Skin Oil, Emulsifying

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 375 (Glyceryl Citrate/Lactate/Linoleate/Oleate)	10
Miglyol 810 (Caprylic/Capric Triglyceride)	40
Miglyol 840 (Propylene Glycol Dicaprylate/Dicaprate)	20
Softigen 701 (Glyceryl Ricinoleate)	1
Mineral Oil	28.6
B. Fragrance	0.4

Preparation:

Components of A are put together, slightly warmed up and stirred homogeneously. Then B is added.

Cleansing Milk

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 960 flakes (Glyceryl Stearate SE)	6
Imwitor 375 (Glyceryl Citrate/Lactate/Linoleate/Oleate)	3
Dynacerein 660 (Oleyl Erucate)	1
Miglyol 840 (Propylene Glycol Dicaprylate/Dicaprate)	5
Sweet Almond Oil	5
Cetyl Alcohol	0.5
B. Keltrol Gel 1% (hydrogel based on xanthan)	7
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is heated up to 75C. B is brought to the same temperature and emulsified into A. C is added at about 30C.

Skin Milk

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 812 (Caprylic/Capric Triglyceride)	5
Dynacerein 660 (Oleyl Erucate)	5
Softisan 378 (Caprylic/Capric/Stearic Triglyceride)	4
Imwitor 375 (Glyceryl Citrate/Laurate/Linoleate Oleate)	3
Emulgade F	5
Isopropyl Myristate	4
Silicon Oil AR 200	3
B. Carbopol 980 gel 1%	10
Water ad	100
C. Fragrance	q.s.

Preparation:

A is blended and heated up to about 75C. B is brought to the same temperature and emulsified by portions into A. C is added at about 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Skin-Whitening/Skin-Lightening
Skin-Whitening Cream

<u>Ingredients:</u>	<u>Wt%</u>
Mineral Oil	10.00
Polawax	8.00
GMS	4.00
Crodamol	3.00
Silicone	1.00
Parsol	1.50
Water deionised	to 100
Croderol GA 7000 (glycerin)	4.00
Purasal S/PF 60	13-20
Purac PH 90	0.10-0.25
Tocopherol acetate	0.5
Perfume, Preservative, Colour	qs

Give formulation is based on world standard formulation. Asia Pacific customers do prefer sometimes a less greasy/sticky formulation and/or improve stability at higher temperatures:

Reduce Stickiness/Greasiness:

- * Exchange mineral oil for an emollient ester, Crodamol OP, which is branch chains and imparts a light emollience on the skin. and/or:
- * Add fatty alcohol level to impart dryness to the skin. Note, that increase of fatty alcohol increases the body of the emulsion. and/or:
- * Other emollients that may be suitable to replace mineral oil; Crodamol AB or CAP. They act as a solvent for the Parsol MCX and aid solubilisation.

Improve Temperature Stability (>50C):

- * Add thickening agent in water phase; such as cellulose, guar gum or natural clay thickening agent.
- * Other alternative: add higher melting point wax, possibly Syncrowax.

SOURCE: Purac America, Inc.: Croda Formulation

Smooth Silky Foundation

This smooth silky foundation uses Tospearl 130A, fine particle silicone resin. The sub-micron spherical particles act as "ball bearings" providing superior slip and lubricity. Tospearl 130A provides a smooth, silky feel, reduces pigment/powder agglomeration and enhances the color of cosmetic foundations. This foundation has demonstrated the use of silicones in conjunction with organics.

Ingredient/Function:Wt%Part A:

Panalane L-14E/Emollient	10
Bis-Phenylpropyl Dimethicone(SF1555)(1)/Emollient	10
C30-45 Alkyl Dimethicone(SF1642)(1)/Thickener, Emollient	2
PEG-30 Dipolyhydroxystearate/Secondary Emulsifier	1.0

Part B:

Titanium Dioxide/Pigment	5.0
Yellow Iron Oxide/Pigment	1.3
Red Iron Oxide/Pigment	0.6
Black Iron Oxide/Pigment	0.1
Polymethylsilsesquioxane (Tospearl 130A)(1)/Lubricity and Feel	3

Part C:

Cyclopentasiloxane (and) Dimethicone Copolyol(SF1528)(1)/Primary Emulsifier	15
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Part D:

Water/Vehicle	q.s.
Butylene Glycol/Humectant	2
NaCl/Stabilizer	1.0
Quaternium-15/Preservative	0.1

Procedure:

1. Combine Part A and heat to 60-65C. Mix until uniform.
2. Mill Part B and add to Part A.
3. Add SF1528 to the batch.
4. In a separate vessel, mix all ingredients of Part D. Heat to 60-65C.
5. Slowly add water phase to oil phase under moderate mixing.
6. Homogenize for 1-2 minutes.

Suppliers:

(1) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CC108

Sprayable Skin Gel

This non-aerosol, low viscosity, clear gel is used in a pump delivery system. It contains Liponic EG-1, Unimoist U-125 and Hylucare to provide complete moisturizing properties. The use of Hypan SA-100H aids in the reduction/elimination of any potential tackiness.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	86.65
1	Uniphen P-23	0.30
2	Hypan SA-100H/Acrylic Acid/Acrylonitrogens Copolymer	0.10
2	Liponic EG-1/Glycereth-26	2.50
3	Viscarin SD 389/Carageenan	1.00
4	Deionized Water	1.00
4	Triethanolamine, 99%	0.20
5	Deionized Water	1.00
5	Unicide U-13/Imidazolidinyl Urea	0.25
6	HTL MYP Hyluronic Acid 1% sol'n	5.00
6	Unimoist U-125	2.00

Procedure:

1. Heat Sequence #1 to 80C on overhead mixer at medium/high speed.
2. Slowly add Sequence #2 into Sequence #1 while mixing at medium/high speed.
3. Add Sequence #3 to batch at medium/high speed.
4. Add premixed Sequence #4 at medium speed. Cool to 35C.
5. Add premixed Sequence #5 at medium/low speed. Cool to 25C.
6. Add premixed Sequence #6 at medium/low speed.

Specifications:

pH: 7.8+/-0.2

Viscosity: LVT #3 @ 12 rpm=7,500 cps+/-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 972

Substantive Lip Balm with Sunscreen

SF1318, silicone resin ester, is a copolymer of a silicone resin and a long-chain organic ester. It provides excellent compatibility with organic materials and substantivity to the skin. It is commonly used to enhance the durability of cosmetic products. In this formulation, SF1318 provides a substantive film which makes the lip balm very durable, providing moisturization as well as sun protection for several hours. Pigments could be added to make a colored lip gloss product.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Lily White Petrolatum/Moisturizer	35.87
Mineral Oil/Emollient	11.00
Castor Oil/Emollient	10.00
Diisostearoyl Trimethylolpropane Siloxy Silicate (SF1318) (1)/Film-former/Emollient	20.00
Propylparaben/Preservative	0.10
Candelilla Wax/Wax matrix	4.00
Yellow Beeswax/Wax matrix	3.00
Ozokerite Wax/Wax matrix	6.00
Carnauba Wax/Wax matrix	3.00
Hydrogenated Castor Oil/Wax matrix	0.50
Tocopherol/Vitamin E/Antioxidant	0.03
Part B:	
Octyl Methoxycinnamate/UV Absorber	6.00
Part C:	
Flavoring (2)	0.50

Procedure:

1. Combine Part A ingredients in order listed and heat with agitation to 85-90C. Mix at temperature for approximately 15 minutes.
2. Cool to 75C. Add Part B with good agitation.
3. Add Part C to Part AB with agitation and mix for 10 minutes. Pour into containers at 75C.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Pineapple Flavor 4-430, Glidco

SOURCE: GE Silicones: Personal Care Formulary: Formula CC 100

Total Block Lipgloss

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Ozokerite FFW/Ozokerite	3.0
Multiwax W445/Microcrystalline Wax	10.0
Cetyl Alcohol	3.0
Modulan/Acetylated Lanolin	19.9
Schercemol TISC/Triisostearyl Citrate	25.0
Indopol H100/Polybutene	22.0
Dipsal/Dipropylene Glycol Salicylate	1.0
NeoHeliopan AV/Octyl Methoxycinnamate	7.5
NeoHeliopan BB/Benzophenone-3	4.5
Propylparaben	0.1
Colors	4.0
Fragrance	q.s.

Procedure:

Weigh and heat all ingredients except for pigments and fragrance, gently to 70C on a steambath until uniform. Remove from heat. Add remaining ingredients and mix slowly to 35C. Pour into pots.
Formula SK-136

Chapstick with Vitamins

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Petrolatum	47.3
Isopropyl Lanolate	6.0
Ozokerite Wax	16.5
Candelilla Wax	4.5
Schercemol DID/Diisopropyl Dilinoleate	25.0
Vitamin A Palmitate	0.5
Vitamin E Acetate	0.2
Fragrance	q.s.

Procedure:

Heat all ingredients to 75-80C until melted and uniform. Cast into molds.
Formula SK-139

SOURCE: Scher Chemicals, Inc.: Formulas SK-136 and SK-139

Total Block Lipgloss

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Ozokerite FFW/Ozokerite	3.0
Multiwax W445/Microcrystalline Wax	9.0
Modulan/Acetylated Lanolin	19.9
Schercemol TISC/Triisostearyl Citrate	20.0
Indopol H100/Polybutene	22.0
Schercemol DID/Diisopropyl Dimer Dilinoleate	7.0
Dipsal/Dipropylene Glycol Salicylate	3.0
NeoHeliopan AV/Octyl Methoxycinnamate	7.5
NeoHeliopan BB/Benzophenone-3	4.5
Propylparaben	0.1
Colors	4.0
Fragrance	q.s.

Procedure:

Weigh and heat all ingredients, except for pigments and fragrance, gently to 70C on a steambath until uniform. Remove from heat. Add remaining ingredients and mix slowly to 35C. Pour into pots.

Formulation SK 137

Lipgloss with Sunscreen

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Schercemol TISC/Triisostearyl Citrate	59.4
Candelilla Wax	8.0
Myristyl Lactate	7.5
Microcrystalline Wax	5.0
Carnauba Wax	2.0
Schercemol DID/Diisopropyl Dimer Dilinoleate	10.0
Propylparaben	0.1
Mica (and) Bismuth Oxychloride (and) Carmine	6.0
Zinc Oxide (Z-Cote, Micronized ZnO)	2.0

Procedure:

Heat all ingredients (except last two) to 75-80C or until melted and uniform. Add pigment and zinc oxide. Mix until homogeneous. Cast into molds.

Formulation SK 84

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Undereye and Spot Concealer Makeup Using Avalure UR 445 Polymer
A0003

This undereye and spot concealer makeup can be applied either from an automatic unit containing a brush for application or from a tube with a narrow opening. The urethane polymer contributes to the long lasting film forming properties while providing improved adhesion to the spot or area being covered. It is also a good substitute for the pigment suspending capabilities of colloidal clay, so common to these types of products.

INCI-CTFA Name/Trade Name:

Wt%

Part A:

1. Deionized Water	58.95
2. Methylparaben NF	0.10
3. Methocel 40-202	0.20
4. Triethanolamine (99%)	1.00
5. DL-Panthenol USP	0.30
6. Avalure UR 445 Polymer	2.50
7. Protachem GL-26/Glycereth-26	4.50

Part B:

8. Mica/Sericite GMS-4C	5.00
9. Kaolin 2457	0.50
10. Titanium Dioxide 3328 USP Anatase Type	3.20
11. C33-7715 Cosmetic Brown/Iron Oxides	0.50
12. C33-7738 Cosmetic Russet/Iron Oxides	0.10
13. C33-7773 Cosmetic Yellow/Iron Oxides	0.40
14. C33-7775 Cosmetic Red/Iron Oxides	0.10
15. C33-7734 Cosmetic Black/Iron Oxides	0.05

Part C:

16. Emersol 132/Stearic Acid	3.00
17. Protachem GMS-450/Glyceryl Stearate	3.00
18. Protachem IPP/Isopropyl Palmitate	2.00
19. Elfac I205/Octyldodecyl Neo-Pentanoate	1.00
20. Eutanol G/Octyldodecanol	2.00
21. Lipovol G/Grape Seed Oil	0.50
22. Lipovol J/Jojoba Oil	3.00
23. Propyl Paraben	0.10

Part D:

24. Dow Corning 245 Fluid/Cyclomethicone	7.00
25. Vitamin E Acetate/Tocopheryl Acetate	0.10
26. Vitamin A Palmitate/Retinyl Palmitate	0.10
27. Actiphyte of Aloe Vera/Aloe Extract	0.10
28. Germaben II	0.50

Continued Next Page

Undereye and Spot Concealer Makeup Using Avalure UR 445 Polymer
A0003 (Continued)

Properties:

Color, Odor, Appearance: Pigmented, moderately thick cream with slight wax-like odor

pH: 7.5-8.0

Viscosity* cP at 25C: 5,000-6,000

*Brookfield RVT @ 20 rpm, #4 spindle

Preparation Procedure:

Part A:

1. Add the deionized water to a suitable kettle and then add the methylparaben.
2. Heat the water to 35C to dissolve the methylparaben and then add the methocel.
3. Continue mixing until the methocel is dispersed and no lumps appear.
4. Add the triethanolamine and mix until the solution is clear. Add the Panthenol and mix until dissolved.
5. Add the Avalure UR 445 polymer and mix until it is dispersed and a colloidal white solution occurs.
6. Add the Glycereth-26 and heat to 75C.

Part B:

7. Mix all of the powders together and mill if necessary until the blend is uniform and no streaks or particles of pigment are present.
8. Add this powder blend to Part A and mix until ready to combine with Part C.

Part C:

9. Mix all of the ingredients of Part C in a suitable vessel and heat to 75C.
10. After all of the ingredients are completely melted, add Part C to Parts A&B and continue mixing until the emulsion forms.

Part D:

11. Begin cooling the combined batch to 70C and add the cyclomethicone. Mix well to insure that the cyclomethicone is brought into the emulsion and is uniformly dispersed. Continue cooling and mixing.
12. Add vitamins at 45C and mix well.
13. Add aloe and mix well.
14. Add the Germaben II and continue cooling to room temperature.

SOURCE: BFGoodrich Specialty Chemicals: Formulation A0003

Waterproof Mascara

SF1318, silicone resin ester, is a copolymer of a silicone resin and a long-chain organic ester. It provides excellent compatibility with organic materials, excellent substantivity and is totally non-irritating to the eyes and skin. It is commonly used to enhance the durability of cosmetic products. In this formulation, SF1318 provides a film which is water resistant, smear resistant, non-flaking and non-irritating to the eyes.

Ingredient/Function:Wt%

Part A:

Deionized Water/Diluent	51.45
Propylene Glycol/Humectant	3.0
Methylparaben/Preservative	0.2
Imidazolidinyl Urea/Preservative	0.15
Triethanolamine 99%/Neutralizer/Emulsifier	3.10
Acrylates/Octylacrylamine Copolymer/Dermacryl-79/ Film-former	5.00

Part B:

Diisostearoyl Trimethylolpropane Siloxy Silicate (SF1318)/Film-former/Emollient	5.00
Candelilla Wax/Wax matrix	4.50
Yellow Beeswax/Wax matrix	5.50
Ozokerite Wax/Wax matrix	2.00
Carnauba Wax/Wax matrix	1.00
Cetyl Alcohol/Thickener/Secondary emulsifier	3.00
Stearic Acid/Primary emulsifier	5.00
Propylparaben/Preservative	0.10

Part C:

Iron Oxides/Pigment	11.00
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Procedure:

1. While heating Part A water to 90C, add remaining ingredients in order listed with moderate propeller agitation.
2. Combine Part B and heat to 90C with moderate propeller agitation. When Part B reaches 90C, add Part C to Part B with high shear homomixer agitation (Silverson with square hole screen) for 30-40 minutes.
3. Add Part BC SLOWLY to Part A at 85-90C with moderate propeller agitation. Mix 10 minutes and begin force-cooling with propeller and sweep agitation to room temperature.

SOURCE: GE Silicones: Personal Care Formulary: Formulation CC 101

Section V

Creams

AHA Soft CreamIngredients:

	<u>Wt%</u>
Phase A:	
Arlamol E	9.0
Brij 72	4.0
Brij 721	2.0
Stearic acid	1.5
Dimethicone, 20 cst	1.0
Stearyl alcohol	1.0

Phase B:

Water	to 100
Propylene glycol	4.0

Phase C:

Purasal S/PF 60 (60% sodium lactate)	5-12
Purac PH 90 (Lactic acid) to required pH	2- 5

Procedure:

1. Heat A to 70C, B to 72C.
 2. Add B to A slowly while stirring.
 3. Homogenise for 1 minute.
- ICI formulation

Moisturising CreamIngredients:

	<u>Wt%</u>
Cosmowax D (cetearyl alcohol and Ceteareth 20)	8.00
GMS A/S (glyceryl stearate (and) PEG-100)	4.00
Light mineral oil (25 cS at 25C)	10.00
Crodamol IPM (isopropyl myristate)	3.00
Silicone 200/100 (dimethicone)	1.00
Water deionised	to 100
Croderol GA 7000 (Glycerin)	4.00
Purasal S/HQ 60	5-12
Purac PH 90	0.05-0.15
Perfume, Preservative, Colour	qs

Heat oil phase and water phase separately to 60-70C. Add water phase to oil phase while stirring. Stir to cool. Add perfume at 40-45C.

Croda formulation

SOURCE: Purac America, Inc.: Suggested Formulations

Anti-Cellulite Cream

An oil-in-water cream containing Bentone Gel TNV rheological additive

<u>Ingredients:</u>	<u>Wt%</u>
Methyl Glucose Sesquistearate	4.50
Hexyl Decanol, Hexyldecyl Laurate	4.00
C12-15 Alkyl Benzoate	3.00
Cetearyl Alcohol	3.00
Glycerine 99.5%	4.00
Algae Extract	0.10
Bentone Gel TNV	3.00
Perfume	0.25
Methyldibromoglutaronitrile, Propylene Glycol	0.20
Demineralized Water	Bal to 100%

Method of Manufacture:

1. Mix the liquid oil and the ester. Thoroughly disperse the Bentone Gel TNV in the mixture. Add the Cetearyl Alcohol and the emulsifier to the mix.
2. Heat to 75C.
3. In a separate vessel, blend the glycerine with the water and heat to 75C.
4. Add the oil phase to the water phase with minimal initial stirring, then emulsify with a homogenizer on low speed. Care is needed with the extent of stirring or a water-in-oil emulsion will form then invert to an oil-in-water system with a large particle size on cooling.
5. At around 65C transfer to a propeller stirrer and continue to cool.
6. At below 35C add the algae extract, perfume and preservative.

The major formulation components of the cream, including the active ingredient Bentone Gel TNV, have been specifically selected to be of vegetable origin.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Anti-Wrinkle Treatment CreamConcept Statement:

An elegant, white, creamy emulsion containing Rovisome-AHA, which delivers Sodium Lactate to the skin.

Ingredients/Function:

	<u>Wt%</u>
1. Pationic SBL (Sodium Behenoyl Lactylate)/Lactylate	1.60
2. Rita Cetearyl Alcohol 50/50 (Cetearyl Alcohol)/ Emulsifier	3.00
3. Rita GMS (Glyceryl Stearate)/Emulsifier	2.60
4. Rita IPP (Isopropyl Palmitate)/Emollient	6.00
5. Rita SSO (Sunflower Seed Oil)/Emollient	6.00
6. Distilled/Deionized Water	71.60
7. Rita Glycerine (Glycerine)/Humectant	3.00
8. Lanodant DM (DMDM Hydantoin)/Preservative	0.20
9. Rovisome-AHA (Sodium Lactate and Alcohol and Lecithin)/Liposome	6.00
10. Fragrance/Odor	q.s.

Compounding Procedure:

Combine items 1 to 5 and heat to 80C. Combine items 6 and 7 and heat to 80C. Add oil phase to water phase. Cool to 35C. Add items 8 and 9. Add item 10.

LI Ref. No. 124-26B

Cleansing CreamConcept Statement:

A cleansing cream with Pationic SCL to provide skin moisture and smoothness, and a pleasant feel.

Ingredients/Function:

	<u>Wt%</u>
1. Rita GMS (Glyceryl Stearate)/Emulsifier	4.00
2. Rita Cetearyl Alcohol 50/50 (Cetearyl Alcohol)/ Emulsifier	1.60
3. Pationic SCL (Sodium Cocoyl Lactylate)/Lactylate	0.50
4. Mineral Oil/Emollient	20.00
5. Ritachol (Mineral Oil and Lanolin Alcohol)/Emollient	4.00
6. Distilled/Deionized Water/Vehicle	64.70
7. Glycerine/Humectant	5.00
8. DMDM Hydantoin/Preservative	0.20

Compounding Procedure:

Combine items 1-5 and heat to 80C. Combine items 6 and 7 and heat to 80C. Add oil phase to water phase. Cool to 35C and add item 8.

LI Ref. No. 124-32

SOURCE: R.I.T.A. Corp.: Facial Care Formulations

Avocado Cream, Paraffin Free

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol Gel B	15
Miglyol 812 (Caprylic/Capric Triglyceride)	8
Imwitor 780K (Isostearyl Glyceryl Succinate)	5
Avocado Oil	6
Lactil	
Sesame Oil	4
B. Karion F (Sorbitol)	5
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.
D. Collagen CLR	3

Preparation:

A is homogeneously stirred and heated up to approx. 75C. B is brought to the same temperature and emulsified into A. C and D are added at about 30C.

Skin Care Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softigen 701 (Glyceryl Ricinoleate)	9
Imwitor 960 flakes (Glyceryl Stearate SE)	8
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Stearic Acid	7
Cetyl Alcohol	2
B. Preservative	q.s.
Glycerol	4
Water ad	100
C. Triethanolamine	1
D. Fragrance	q.s.

Preparation:

A is heated to about 75C. B is brought to the same temperature and put into C. Then B+C is emulsified into A. D is stirred in at about 40C. It is advantageous to homogenize the cream prior to filling.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Barrier Cream

A protective skin cream which acts as a barrier, providing protection to the skin when under occupational and environmental stress. In addition, it provides protection from chafed, chapped or wind-burned skin and falls within the requirements of the FDA monograph for OTC skin protectant products. SF1632 is a silicone alkyl copolymer which provides an occlusive barrier and reduces water loss from the skin (TEWL). SF1214 is a solution of high molecular weight silicone gum in cyclopentasiloxane which provides a breathable barrier and a smooth, silky feel to the skin.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	77.23
Tetrasodium EDTA/Chelating agent	0.05
PEG-8/Humectant	3.00
1,3 Butylene Glycol/Humectant	2.00
Methylparaben/Preservative	0.25
Propylparaben/Preservative	0.10
Imidazolidinyl Urea/Preservative	0.20
Magnesium Aluminum Silicate/Thickener	0.25
Part B:	
Cetearyl Methicone(SF1632)(1)/Occlusive/TEWL reduction	8.00
Cyclopentasiloxane (and) Dimethicone(SF1214)(1)/	
Protectant/Smooth/Silky feel	7.00
Acrylates/C10-30 Alkyl Acrylate Crosspolymer(2)/	
Emulsifier	0.30
Carbomer(3)/Thickener	0.30
Sorbitan Oleate/Emulsifier	0.60
Part C:	
Fragrance(4)	0.12
Part D:	
Triethanolamine 99% (to pH 7.0)/Neutralizer	0.60

Procedure:

1. Heat water of Part A to 50C. Add remaining ingredients of Part A with moderate propeller agitation. Mix for 10 minutes.
2. Combine Part B with sweep agitation at ambient temperature. Mix until a smooth "paste" is obtained.
3. Add Part B to Part A with rapid propeller agitation. Mix for 30 minutes or longer to ensure that the polymers are completely dispersed.
4. Cool with moderate agitation to 45C. Add Part C to batch with moderate propeller agitation. Mix for 10 minutes
5. Add Part D to batch at 40C. Mix with moderate agitation for 20 minutes.
6. Cool to room temperature.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Pemulen TR-1, BF Goodrich
- (3) Carbopol 2984, BF Goodrich
- (4) Fragrance #830079, Shaw Mudge

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 110

Care Cream

Solid cream. Good spreadability, good absorption. Leaves a pleasant soft touch.

<u>Ingredients:</u>	<u>Wt%</u>
A: Emulgator E 2155	6.00
Isopropyl Myristate	10.00
Stearyl Alcohol	1.00
Mineral Oil	3.00
Wacker-Belsil DM 100	2.00
Wacker-Belsil SM 6018	5.00
B: Glycerine	3.00
Water	70.00

Preservatives, fragrances, pigments q.s.

Heat A and B to 65C, mix and homogenize, cool whilst stirring.

SOURCE: Wacker Silicones: Formulation 1325 AH

W/O Basic Cream

<u>Ingredients:</u>	<u>Wt%</u>
A. Miglyol 812	20.00
Imwitor 780K	5.00
Softisan 649	3.00
Petrolatum, white	23.00
Beeswax	7.00
B. Preservative	q.s.
Water, ad	100.00
C. Fragrance	q.s.

Preparation:

A is heated to 75-80C.

B is heated to the same temperature.

B is slowly emulsified into A.

At about 30C C is added.

SOURCE: Huls Aktiengesellschaft: Formulation HUK WOCII

Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A: Polyoxyethylene Sorbitan Monostearate (20EO)	2.5
Sorbitan Monostearate	2.5
Polyoxyethylene Sorbit Tetraoleate (30EO)	1.0
Stearic Acid	3.0
Cetanol	1.0
Cetyl Palmitate	2.0
Paraffin	3.0
MITD (Isotridecyl Myristate)	2.0
Glyceryl Trioctanoate	3.0
Liquid Paraffin	10.0
Alpha-Bisabolol	0.1
Butyl Parahydroxybenzoate	0.1
B: Isoprene Glycol	5.0
Triethanolamine	0.1
Methyl Parahydroxybenzoate	0.1
Purified Water	Up to 100

Moisturizing Cream

<u>Raw Materials:</u>	<u>Wt%</u>
Stearic acid	15.0
Lanolin	5.0
Beeswax	2.0
Robane	20.0
d-Sorbitol 70%	13.0
Sorbitan trioleate	1.0
POE Sorbitan trioleate	1.0
Water, perfume, preservative	q.s. to 100

Moisturizing Cream

<u>Raw Materials:</u>	<u>Wt%</u>
Hexadecyl alcohol	35.0
Robane	10.0
Cetina	2.0
Paraffin 130	2.0
Beeswax	14.0
Lanolin, anhydrous	1.0
Borax	1.0
Water, perfume, preservative	q.s. to 100

SOURCE: Robeco Chemicals Inc.: Suggested Formulations

Cream, Type O/W with Lactokine Fluid and Cutavit Richter

<u>Ingredients:</u>	<u>Wt%</u>
a) Lubrajel MS	15.00
Lanette 16	5.00
Cetiol MM	5.00
Cutavit Richter	1.00
Phenonip	0.30
b) Water, distilled	63.20
Phenonip	0.30
Ultrez 10	0.40
Keltrol	0.20
1,2 Propylene glycol	3.00
D-Panthenol	0.50
NaOH 10%	1.10
c) Lactokine Fluid	5.00

pH value 6.10

Manufacture:

- a) melt and bring to approx. 70C;
 b) heat to approx. 70C and stir into a).
 Continue stirring until cooled to approx. 30C;
 c) stir in.
 Perfume, homogenize

Cream, Type O/W, with Lactokine Fluid

<u>Ingredients:</u>	<u>Wt%</u>
a) Arlamol HD	10.00
Arlamol M 812	5.00
Stearyl alcohol	5.00
Arlacel 60	2.00
Phenonip	0.30
b) Water, distilled	65.30
Phenonip	0.30
G-2330	1.50
Keltrol	0.10
Arlatone 2121	5.50
c) Lactokine Fluid	5.00

Manufacture:

- a) melt and bring to about 80C;
 b) heat to about 80C and stir into a).
 Continue stirring until the cream has cooled to about 30C;
 c) stir in.
 Perfume, homogenize.

SOURCE: Chemisches Laboratorium Dr. Kurt Richter GmbH: Formulas

Day Cream

A photoprotecting and emollient cream for daily use for moisturising and protection. The inclusion of Lipex Shea-U brings UV-absorbing and anti-inflammatory components to the skin. Lipex 512 helps to soften and smooth the skin to prevent dryness and further improve the excellent skin feel of shea derived products.

<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
A. Arlatone 985/Polyoxyethylene stearyl stearate	4.0
Brij 721/Steareth-21	2.0
Jarcol I-20/Octyldodecanol	8.0
Lipex 512/Shea butter (Bytorosternum parkii)	4.0
Lipex Shea-U/Shea butter unsaponifiables	4.0
B. Atlas G-2330/Sorbeth-30	2.5
Water	75.0
Phenonip/Esters of p-hydroxybenzoic acid	0.45
C. Perfume	0.05

Procedure:

1. Heat the phases A and B to 75C.
2. Add the oily phase A to the water phase B whilst stirring thoroughly.
3. Cool down to 55C, homogenize.
4. Cool down to 35C, add C.
5. Cool down to room temperature whilst stirring.

Rheological Characteristics:

Viscosity after one week at 20C (Bohlin Rheometer VOR):
 10 Pas at shear rate of 1.0 s⁻¹
 1.1 Pas at shear rate of 30.0 s⁻¹

SOURCE: Jarchem Industries, Inc.: Suggested Formulation

Day Protecting Cream (Elhibin/Iricalmin)

This day cream with natural based emulsifier contains UV-filters and different active ingredients. Iricalmin has an anti-irritant effect and promotes the normalization of stressed skin. Elhibin protects the skin from degradation of proteins by its elastase inhibitor activity.

<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
A) Tego Care 450/Polyglyceryl-3 Methylglucose Distearate	2.50
Lanette O/Cetearyl Alcohol	2.00
Cutina GMS V/Glyceryl Stearate	2.00
Cetiol OE/Dicaprylyl Ether	5.00
Cetiol 868/Octyl Stearate	8.00
Fitoderm/Squalane	5.00
Parsol MCX/Octyl Methoxycinnamate	2.00
Parsol 1789/Butyl Methoxydibenzoylmethane	1.00
Vitamin E Acetate/Tocopheryl Acetate	0.20
B) Deionized Water	61.50
Elhibin/Soy Bean (Glycine Soja) Protein	2.00
C) Glycerin/Glycerin	5.00
Iricalmin/Water, Wheat (Tritium Vulgare) Germ Extract, Saccharomyces Cerevisiae Extract, Sodium Hyaluronate	3.00
Phenonip	0.50
D) Fragrance/Rivalia 0/221212	0.30

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold. Finally incorporate phase D).

SOURCE: Pentapharm Ltd.: Application No. A 056.0/05.99

Dry Skin Cream with Completech VCB-SM-H

A skin softening moisturizing cream utilizing Completech VCB-SM-H to support the natural defense mechanisms against the adverse effects of free radicals.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	69.15
2	Keltrol/Xanthan Gum	0.25
2	Veegum/Magnesium Aluminum Silicate	0.20
3	Uniphen P-23	0.50
3	Glycerine	1.00
3	Liponic EG-1/Glycereth-26	1.50
4	Ultrapure L/White Petrolatum USP	7.50
4	Meadowfoam Seed Oil	2.00
4	Lipomulse 165	2.00
4	Liponate NPGC-2/Neopentyl Glycol Dicaprylate/ Dicaprates	2.50
4	Lipovol SAF/Safflower Oil	1.00
4	Lipovol SES/Sesame Oil	1.00
4	Lipocol C/Cetyl Alcohol	1.00
4	Lipopeg 6000-DS/PEG-150 Distearate	0.75
4	Lipowax P/Emulsifying Wax, NF	0.50
5	Deionized Water	1.00
5	Unicide U-13/Imidazolidinyl Urea	0.25
5	Citric Acid(50% sol'n)	QS
6	Completech VCB-SM-H	1.20
6	Deionized Water	6.50
7	Unistab S-69/Farnesol (and) Linalool	0.20

Procedure:

1. Mix Sequence #1 together with overhead mixer while heating to 78C.
2. Dry mix Sequence #2 ingredients and add slowly to Sequence #1 with medium/high agitation. Mix well until both gums are completely hydrated.
3. Premix Sequence #3 ingredients and add to batch while holding temperature at 78C.
4. Mix Sequence #4 together while heating to 78C or until completely melted and add to batch. Cool to 60C.
5. At 60C place batch on sweep blade mixing at low speed while cooling to 35C.
6. At 35C add premixed Sequence #5 to batch.
7. Add premixed Sequence #6 to batch. Cool to 25C.
8. At 25C add Sequence #7 to batch at low speed.

Specifications:

pH: 5.50+/-0.2

Viscosity: T-E @ 3 rpm=38,400cps+/-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 1032

Economy Skin Cream

An economical oil-in-water cream containing Bentone Gel MIO and Bentone LT.

<u>Ingredients:</u>	<u>Wt%</u>
Cetearyl Alcohol, Ceteareth 20	3.50
Mineral Oil	5.00
Octyldodecanol	1.50
Cetyl Alcohol	0.75
Octyl Palmitate	5.00
Glycerine 99.5%	2.00
Perfume	0.40
Bentone Gel MIO	1.50
Bentone LT (dispersion)	23.30
Demineralized Water	Bal to 100%
Bentone LT dispersion	
Bentone LT	3.00
Demineralized Water	97.00

Method of Manufacture:

1. Prepare a dispersion of the Bentone LT in water. (See below)
2. Add the glycerine and water to the Bentone LT dispersion and heat to 75-80C.
3. Thoroughly disperse the Bentone Gel MIO in the liquid oils and ester, add the emulsifier and the Cetyl Alcohol and heat to 75-80C.
4. Add the two phases together with high shear stirring.
5. At 50C, transfer to a propeller stirrer and continue to cool.
6. At 30C add the perfume and preservative.

Preparation of Bentone LT dispersion:

1. Prepare a 3% dispersion of Bentone LT in demineralized water using a rotor-stator or similar high-shear mixer (e.g. Silverson). Start the mixer in the water, steadily add the Bentone LT to the vortex and stir until completely dispersed (15-20 mins).
2. Allow the suspension to stand to let any entrapped air escape.

This basic functional skin care cream has been developed to meet the needs of the economy emulsions sector. The formulation provides a rich feeling cream (that would be expected from higher cost ingredients), excellent application properties and leaves a silky after-feel. It demonstrates Bentone Gel can be used in the "economy" end of the market as well as in the usual higher-margin sector products.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Emollient Night Cream

This rich, nongreasy cream is ideal for overnight use. High levels of moisturizers provide excellent treatment for dry skin.

Ingredient/Trade Name:

	Wt%
A: Deionized Water	55.40
Propylene Glycol	3.50
Sodium PCA/Ajidew N-50	1.00
Methylparaben	0.15
B: Petrolatum/Snow Petrolatum	10.00
Benzyl Laurate/Mazon EE-1	7.50
Mineral Oil/Drakeol 500	4.00
Isopropyl Myristate/Estol 1514	3.50
Cetyl Alcohol	3.00
PEG-20 Stearate/Cerasynt 840	3.00
Polysorbate 60/Tween 60	3.00
Stearyl Alcohol	3.00
Arlamol E/PPG-15 Stearyl Ether	2.00
Tocopheryl Acetate/Vitamin E Acetate	0.50
Propylparaben	0.15
C: Imidazolidinyl Urea/Germall 115	0.30
Fragrance	q.s.

Procedure:

Heat part A to 70C with stirring. Heat part B to 75C with stirring until all the solids have dissolved. Add part A to part B with stirring, and continue mixing while allowing the blend to cool. Add part C when the mixture is below 40C. Continue stirring until the mixture is below 30C, then package.

Formula 597-114

Cocoa Butter Skin Cream

This rich, anhydrous cream goes on smoothly and provides excellent moisturization. It gives relief to extremely dry skin and may be beneficial for stretch marks.

Ingredient/Trade Name:

	Wt%
Mineral Oil/Drakeol 21	32.00
Microcrystalline Wax	32.00
Cocoa Butter	25.50
Petrolatum/Snow Petrolatum	10.00
Tocopheryl Acetate/Vitamin E Acetate	0.20
Allantoin	0.20
Propylparaben	0.10
Fragrance	q.s.

Procedure:

Mix all ingredients except fragrance at 95C until uniform. Let cool with mixing. Add the fragrance and pour into containers just above the solidification temperature.

Formula 597-122

SOURCE: Penreco: Suggested Formulations

Hand and Nail Cream

A rich textured, nourishing, water-in-oil hand and nail cream containing Bentone Gel VS-5

<u>Ingredients:</u>	<u>Wt%</u>
Laurylmethicone Copolyol	2.00
Cyclomethicone	7.00
Isopropyl Palmitate	2.00
Glyceryl Tricaprylate/caprate	6.00
Sweet Almond Oil	2.00
Silk Protein Hydrolysate	1.00
Sodium Chloride	2.00
Bentone Gel VS-5	4.00
Perfume	0.15
Preservative	0.10
EDTA Disodium	0.10
Demineralized Water	Bal to 100%

Method of Manufacture:

1. Mix together the silk protein, Sodium Chloride, EDTA, glycerine and water.
2. Mix the Bentone Gel VS-5 thoroughly with the cyclomethicone. This is a simple blending operation and does not require heating.
3. Add the gel pre-mix to the rest of the oil phase and blend thoroughly.
4. Using high-shear mixing, slowly add approximately 1% of the water phase to the oil phase and continue to homogenize for several minutes before further addition. Very slowly add the remainder of the water phase, a little at a time, waiting until the previous addition has been incorporated into the system before further water is added. Continue to homogenize for several minutes after the addition is complete.
5. Add perfume and preservative.

Water-in-oil creams of this type tend to be somewhat heavy in texture and have residual tack. The use of Bentone Gel VS-5 retains a rich texture, yet gives the cream a light feel and eliminates both the greasy feel and tack.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formulas

Light Daycream, Skin Smoothing

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 812 (Caprylic/Capric/Triglyceride)	4
Imwitor 928 (Glyceryl Cocoate)	1
Miglyol 840 (Propylene Glycol Dicaprylate/Dicaprate)	8
Dynacerin 660 (Oleyl Erucate)	4
Imwitor 960 flakes (Glyceryl Stearate SE)	8
Imwitor 375 (Glyceryl Citrate/Lactate/Linoleate/Oleate)	2
PCL liquid (Synthetic rump fat)	2
Cetyl Alcohol	0.5
B. Glycerol	6
Allantoin	0.2
Preservative	q.s.
Water ad	100

Preparation:

A is heated to about 75C. B is brought to the same temperature and emulsified into A. C is added at about 40C.

Eye Cream with UV-filter and Evening Primrose Oil

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 818 (Caprylic/Capric/Linoleic Triglyceride)	5
Miglyol 829 (Caprylic/Capric/Succinic Triglyceride)	5
Dynacerin 660 (Oleyl Erucate)	5
Imwitor 370 (Glyceryl Stearate Citrate)	5
Imwitor 375 (Glyceryl Citrate/Lactate/Linoleate/Oleate)	8
Evening Primrose Oil	3
Hombitec L5 (Micronized TiO ₂)	3
B. Carbopol 980-Gel 1%, neutralized with KOH	15
Preservative	q.s.
Water ad	100
C. Extrapon Biopollin Spezial (plant extract)	2

Preparation:

A is put together, heated up to about 75-80C and is homogenized. B is stirred homogeneously, brought to the same temperature and emulsified into A. C is added at about 30C and then stirred cold.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Moisture Cream

<u>Raw Materials:</u>		<u>Wt%</u>
A. Miglyol 829 (Caprylic/Capric/Succinic Triglyceride)		12
Imwitor 370 (Glyceryl Stearate Citrate)		5
Imwitor 928 (Glyceryl Cocoate)		5
B. Hygroplex HHG (Moisture factor)		5
Carbopol 980 (Carbomer)		0.2
NaOH 10%		0.4
Preservative		q.s.
Water ad		100

Preparation:

A is heated to ca. 75C. B is mixed and brought to the same temperature. Then B is emulsified into A. C is added at about 30C.

W/O Cream, Basic Receipt

<u>Raw Materials:</u>		<u>Wt%</u>
A. Miglyol Gel B		10
Imwitor 780K (Isostearyl Glyceryl Succinate)		3
Mineral oil		17
B. Paraffin		3
C. Preservative		q.s.
Water ad		100

Preparation:

A is homogeneously stirred, B is added into A and the mixture is heated to approx. 75C. C is brought to the same temperature and emulsified into A+B.

Nightcream with Wheat Germ Oil

<u>Raw Materials:</u>		<u>Wt%</u>
A. Miglyol Gel B		20
Imwitor 780K (Isostearyl Glyceryl Succinate)		5
Wheat Germ Oil		5
Mineral Oil		8
Paraffin		3
B. Magnesium Sulphate		2
Preservative		q.s.
Water ad		100
C. Fragrance		q.s.

Preparation:

A is homogeneously stirred and warmed up to about 75C. B is brought to the same temperature and emulsified into A+B. C is admixed at approx. 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Moisture Cream-IIngredients/CTFA Name:Wt%

Formula A:

Schercemol DID/Diisopropyl Dimer Dilinoleate	11.0
Stearic Acid	5.0
Schercemol GMIS/Glycerol Monoisostearate	8.0
Hydroxylated Lanolin	0.5
Synthetic Spermaceti Wax/Cetyl Esters	4.0

Formula B:

Propylene Glycol	3.0
Triethanolamine (99%)	1.5
Deionized Water	67.0
Preservative	q.s.

Procedure:

Heat both phases to 70C. Add water to oil with moderate agitation. Cool to room temperature with mixing.

Moisture Cream-#2Ingredients/CTFA Name:Wt%

Formula A:

Schercemol 185/Isostearyl Neopentanoate	11.0
Stearic Acid	5.0
Schercemol GMIS/Glycerol Monoisostearate	8.0
Hydroxylated Lanolin	0.5

Formula B:

Propylene Glycol	3.0
Triethanolamine (99%)	1.5
Deionized Water	67.0
Preservative	q.s.

Procedure:

Heat both phases to 70C. Add water to oil with moderate agitation. Cool to room temperature with mixing.

SOURCE: Scher Chemicals, Inc.: Formulation SK 145

Moisturizing Cream #3

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
A. Schercemol PGMS (Propylene Glycol Stearate)	2.00
Schercemol TIST (Triisostearyl Trimerate)	2.00
Cetyl Alcohol	3.00
Arlacel 165 (Glyceryl Stearate & PEG 100 Stearate)	2.50
Schercemol DID (Diisopropyl Dimerate)	8.00
B. Water, Deionized	75.75
Carbopol 934	0.50
C. Propylene Glycol	0.70
Methyl Paraben	0.20
Propyl Paraben	0.10
D. Water, Deionized	4.50
Potassium Hydroxide	0.50
E. Fragrance (Givaudan)	0.25

Procedure:

1. Prepare Part A by heating the ingredients to 75C to dissolve the solids.
2. Part B. Prepare Carbopol solution by dispersing Carbopol into water using high speed agitation until a smooth slurry is obtained. Then heat the dispersion to about 80C until a smooth, viscous solution is formed.
3. Combine Part C at 55C and add to Part B.
4. Add Part B & C to Part A with continual mixing. Allow the batch to cool.
5. At 55C, add Part D. Then add fragrance at room temperature.

Cleansing Cream #4

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
A. Schercemol MM/Myristyl Myristate	4.00
Stearic Acid, Triple Pressed	3.00
Schercemol 318/Isopropyl Isostearate	7.00
Schercemol PGMS/Propylene Glycol Stearate	4.00
Propyl Paraben	0.20
Arlacel 165/Glycerol Stearate & PEG 100 Stearate	2.50
Cetyl Alcohol	1.00
B. Triethanolamine	1.50
Carbowax 400	5.00
Water, Deionized	71.35
Methyl Paraben	0.20
C. Fragrance (Givaudan)	0.25

Procedure:

1. Prepare Part A. Heat it to 70-75C.
2. Prepare Part B. Heat it to 70-75C.
3. Add Part B to Part A with continual stirring.
4. Cool to 40C with agitation. Add fragrance.

SOURCE: Scher Chemicals, Inc.: Formulary

Moisturizing Day Cream (Fitobroside/Mariscan)

This soft cream for daily use is based on many natural ingredients. Fitobroside positively influences the skin moisture content by its barrier repairing activity. Mariscan increases the skin moisture by its water binding capacity and gives a smooth feel to the formulation.

<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
A) Cremophor GS 32/Polyglyceryl-3 Distearate	4.00
Lanette O/Cetearyl Alcohol	3.00
Stearic Acid/Stearic Acid	1.00
Sesame Oil/Sesame Oil	6.00
Cetiol LC/Coco-Caprylate/Caprate	3.00
Abil-350/Dimethicone	2.00
B) Deionized Water	69.20
Mariscan/Glycosaminoglycans	4.00
C) 1,3-Butandiol/Butylene Glycol	5.00
Phenonip	0.50
Fitobroside/Wheat (Triticum Vulgare) Germ Extract	2.00
D) Fragrance/Rivalia 0/221212	0.30

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold. Finally incorporate phase D.

Application No. A 055.0/05.99

Anti-Ozone Cream (Preregen)

In this simple cream, with "PEG-free" raw materials, Preregen protects the skin from damage due to an enhanced ozone concentration in the atmosphere (summer smog).

<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
A) Tego Care 450/Polyglyceryl-3 Methylglucose Distearate	3.00
Lanette O/Cetearyl Alcohol	2.25
Cutina GMS V/Glyceryl Stearate	2.25
Cetiol 868/Octyl Stearate	10.00
Fitoderm/Squalane	5.00
B) Deionized Water	67.00
C) Glycerin/Glycerin	5.00
Phenonip	0.50
D) Preregen/Soybean (Glycine Soya) Protein, Oxido Reductases	5.00

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold. Finally incorporate phase D).

Application No. A 053.A/06.99

SOURCE: Pentapharm Ltd. Suggested Formulations

Multifunctional Day Cream

In this simple, white emulsion the active ingredients Cerasol and Sericin exert barrier regeneration and therefore protecting and moisturizing functions. A pleasant and multifunctional day cream with sun protection filters is obtained.

Item: Ingredients/INCI Name:

		Wt%
1	A) Emulgade SE	8.00
2	Lanette O/Cetearyl Alcohol	2.50
3	Paraffin Oil/Mineral Oil	4.50
4	Miglyol 812/Caprylic/Capric Triglyceride	3.00
5	Abil-350/Dimethicone	0.50
6	Parsol MCX/Octyl Methoxycinnamate	2.00
7	Parsol 1789/Butyl Methoxydibenzoylmethane	1.00
8	Cerasol	1.50
9	B) Deionized Water	70.20
10	Phenonip	0.50
11	Glycerin	3.00
12	Sericin	3.00
13	C) Fragrance/Kaya EV 2940	0.30

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold.

SOURCE: Pentapharm Ltd.: Application No. A 044.0/12.97

Peeling Cream (O/W) with AllantoinRaw Materials:

	Wt%
A Emulsifier E 2155/Stearyl Alcohol (and) Steareth-7 (and) Steareth-10	2.00
Teginacid H/Glyceryl Stearate (and) Ceteth-20	2.00
Luvitol EHO/Cetearyl Octanoate	10.00
Inwitor 900/Glyceryl Stearate	3.00
Cetiol/Oleyl Oleate	5.00
Lunacera M/Microwax	1.00
Miglyol 812 neutral oil/Caprylic/Capric Triglyceride	3.00
B Allantoin	20.00
Propanediol-1,2/Propylene Glycol	4.00
Preservatives	q.s.
Water, demineralized	ad 100.00

Procedure:

Heat phase A to 75C, phase B to 80C. Add phase B slowly to phase A while stirring. Homogenize. Cool down while stirring. Add perfume at 40C as required.

Note:

Samples contain as preservatives:

0.05% Propyl-4-hydroxybenzoate (Merck-Art.-No. 107427)

0.15% Methyl-4-hydroxybenzoate (Merck-Art.-No. 106757)

SOURCE: Rona-Merck: Formulation 03-19/K

Night CreamConcept Statement:

A elegant, non-greasy cream that conditions and moisturizes the skin with Pationic SBL. Rafferminine and Tensine protect the elastin fibers and reinforce skin firmness.

Ingredients/Function:

	<u>Wt%</u>
1. Pationic SBL (Sodium Behenyl Lactylate)/Lactylate	1.50
2. Rita Cetearyl Alcohol 50/50/Emulsifier	3.00
3. Rita GMS (Glyceryl Stearate)/Emulsifier	2.60
4. Rita IPP (Isopropyl Palmitate)/Emollient	6.00
5. Ritachol SS (Stearyl Stearate)/Emollient	3.00
6. Petrolatum	5.00
7. Dimethicone/Lubricant	0.50
8. Rita Propylparaben (Propylparaben)/Preservative	0.20
9. Distilled/Deionized Water	65.70
10. Glycerine/Humectant	3.00
11. Tetrasodium EDTA/Chelating Agent	0.10
12. Rita Methylparaben (Methylparaben)/Preservative	0.20
13. DMDM Hydantoin/Preservative	0.20
14. Rafferminine (Hydrolyzed Soy Flour)/Skin Tightener	4.00
15. Tensine (Wheat Protein)/Film Former	5.00

Compounding Procedure:

Combine items 1 to 8 and heat to 80C. Combine items 9 to 12 and heat to 80C. Add oil phase to water phase with agitation. Cool to 40C and add items 13 to 15.

SOURCE: R.I.T.A. Corp.: Facial Care Formula LI Ref. No. 124-83

Moisturizing Face CreamRaw Materials:

	<u>Wt%</u>
Spermwax	5.0
Cetina	5.0
Robane	5.0
Isopropyl Myristate	3.0
Glycerin	5.0
Water, perfume, preservative	q.s. to 100

SOURCE: Robeco Inc.: Suggested Formula

O/W-Cream

"contains no ethylene oxide"
without mineral oil,
manufacturing at room temperature

Recipe:

	Wt%
A Hostacerin DGI/Polyglyceryl-2 Sesquiosostearate	2.00
Cetiol V/Decyl Oleate	7.00
Jojoba oil	5.00
Isopropyl palmitate	6.00
B Carbopol 980/Carbomer	0.70
C Hostapon KCG/Sodium Cocoyl Glutamate	0.80
Caustic soda solution (10%)	2.80
Glycerin	3.00
Water	72.30
Preservative	q.s.
D Fragrance	0.40

Procedure:

1. Stir B into 1, then add C and stir well.
 2. Add D to 1.
 3. Homogenize if necessary.
- Formula A VI/1753

O/W-Cream

"contains no ethylene oxide"
without mineral oil

Recipe:

	Wt%
A Hostacerin DGMS/Polyglyceryl-2 Stearate	5.00
Isopropyl palmitate	5.00
Almond oil	7.00
Cetiol V/Decyl Oleate	10.00
B Carbopol 980/Carbomer	0.50
C Hostapon KCG/Sodium Cocoyl Glutamate	0.40
Caustic soda solution (10%)	0.80
Aquamollin BC pdr.h.c./Ethylenediamine Tetraacetic Acid Sodium Salt	0.10
Citric acid (10%)	0.25
Glycerin	3.00
Water	66.35
Preservative	q.s.
D Fragrance	0.40

Procedure:

1. Melt A at approx. 80C, then add B.
 2. Heat C to approx. 80C.
 3. Stir 2 into 1.
 4. Stir until cool.
 5. Add D to C at approx. 35C.
 6. Homogenize if necessary.
- Formula A VI/1754

O/W-Cream
with a bacteriostatic effect

Recipe:

	<u>Wt%</u>
A Hostaphat KW 340 N/Triceteareth-4 Phosphate	2.00
Hostacerin DGSB/Polyglyceryl-2 PEG-4 Stearate	7.00
Mineral oil, low viscosity	5.00
Eutanol G/Octyldodecanol	8.00
Isopropyl isostearate	5.00
B Carbopol 980/Carbomer	0.30
C Octopirox/Piroctone Olamine	0.20
D 1,2-Propylene glycol	10.00
E Caustic soda solution (10%)	0.40
Water	61.80
Preservative	q.s.
F Fragrance	0.30

Procedure:

1. Melt A at approx. 60C, then add B.
 2. Dissolve C in D while heating.
 3. Stir 2 into 1.
 4. Heat E to approx. 60C.
 5. Stir 4 into 3 and stir until cool.
 6. At approx. 35C add F to 5.
 7. Homogenize the emulsion.
- Formula A VI/8608

Depilatory Cream

Recipe:

	<u>Wt%</u>
A Hostacerin DGSB/Polyglyceryl-2 PEG-4 Stearate	6.00
Hostacerin T-3/Ceteareth-3	5.00
Mineral oil, high viscosity	2.00
Isopropyl palmitate	1.00
Coconut oil	2.00
Antioxidant	q.s.
B Urea	3.00
1,2-Propylene glycol	5.00
Water	66.70
Preservative	q.s.
C Calcium thioglycolate trihydrate	7.50
Calcium hydroxide (powder)	1.50
D Fragrance	0.30

Procedure:

1. Melt A at ca. 70C.
 2. Heat B to ca. 70C.
 3. Stir 2 into 1.
 4. Stir until cool.
 5. At room temperature stir the components of C into 4, then add D.
 6. Homogenize the emulsion.
- Formula A VI/8703

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Paraffin Free Glycerol Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 370 (Glyceryl Stearate Citrate)	6
Imwitor 900 (Glyceryl Stearate)	7
Miglyol 812 (Caprylic/Capric Triglyceride)	18
Miglyol 840 (Propyleneglycol Dicaprylate/Dicaprate)	9
B. Glycerol	15
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is heated up to about 75C. B is heated to the same temperature and emulsified into A. C is added at about 30C.

Day Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 900 (Glyceryl Stearate)	7
Imwitor 370 (Glyceryl Stearate Citrate)	4
Miglyol 812 (Caprylic/Capric Triglyceride)	16
PCL-liquid (Synthetic rump fat)	3
B. Glycerol	20
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is heated ca. 75C and B of same temperature is emulsified into A. C is added at about 30C.

Skin Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 370 (Glyceryl Stearate Citrate)	5
Imwitor 900 (Glyceryl Stearate)	6
Dynacerin 660 (Oleyl Erucate)	6
Dynasan 114 (Trimyristin)	6
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Isopropyl Myristate	4
Sesame Oil	0.7
Wheat Germ Oil	0.5
Antioxidant	q.s.
B. Preservative	q.s.
Water ad	100
C. Placentaliquid, aqueous	0.5

Preparation:

A is mixed and heated up to 75C. B is brought to the same temperature and emulsified into A. C is added at about 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Protective Cream with Cromoist CM Glucan

Due to the incorporation of Cromoist CM Glucan, this cream can protect skin from environmental insult and help it to function better. Cromoist CM Glucan is a unique protective and therapeutic agent that works by stimulating the skin's own defense mechanisms, resulting in protective effects that enhance skin function and increase the skin's resistance to UVA-induced oxidative stress. Crodafos CES is a substantive phosphate-based emulsifying system that enhances the delivery of the other ingredients and improves the application properties of the cream.

<u>Ingredients:</u>	<u>Weight%</u>
Part A:	
Crodafos CES (Cetearyl Alcohol (and) Cetearyl Phosphate)	4.0
Crodamol GTCC (Caprylic/Capric Triglyceride)	5.0
Corona PNL (Lanolin)	1.0

Part B:	
Deionized Water	69.8
Triethanolamine (98%)	0.2

Part C:	
Deionized Water	5.0
Hydrotritricum WAA (Wheat Amino Acids)	1.0

Part D:	
Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben	1.0
Cromoist CM-Glucan (Sodium Carboxymethyl B-Glucan)	1.0
Incromectant LAMEA (Acetamide MEA (and) Lactamide MEA)	5.0

Part E:	
Deionized Water	5.0
DL Panthenol	2.0

pH=4.5+-0.5

Viscosity=20,000 cps+-10% (RVT Spindle #TC @ 10 rpm @ 25C)

Procedure:

Combine ingredients of Part A with mixing and heat to 75-80C. Combine ingredients of Part B with mixing and heat to 75-80C. Add ingredients of Part A to B with mixing and cool to 50C. Add ingredients of Part C, D and E with mixing and cool to desired fill temperature.

SOURCE: Croda Inc.: Formulation SC-265

Pure as Water Cleansing Cream

<u>Ingredient/Tradename:</u>	<u>Wt%</u>
Phase A:	
Cyclomethicone & dimethiconol copolyol/Dow Corning 3225C	8.00
Cyclomethicone & dimethiconol/Dow Corning 1401	6.00
Cyclomethicone/Dow Corning 435	4.00
Hydrogenated Polybutene/Panalene L-14E	5.00
DL-Alpha-Tocopherol Linoleate/Vit E-linoleate	1.00
Bisabolol/Dragosantol	0.20
Perf Compound/Perf. Rainforest	0.20

Phase B:	
Hexylene Glycol	12.40
Glycerin	11.00
Polyethylene Glycol-16 (PEG-800)	16.00
Dimethicone Copolyol/Dow Corning 2501	2.00
Plant extract/Extrapone Witch Hazel	3.00
D-Panthenol/Panthenol 50P	1.00
Purac PF/P 41	4.00
Propylene Glycol/Germaben II-E	
Diazolidinyl Urea	
Methyl Paraben	
Propyl Paraben	
Water	25.60

Procedure:

1. Mix ingredients of oil phase (a) and measure RI (RII), then warm them slightly (up to 35 degrees C).
2. Mix ingredients of water phase (B) until homogeneous and warm them slightly to solubilise DC 2501 and PEG 800.
3. Measure RI of water phase (R12).
4. Adjust R12 to match RII on a way:
 - if $R12 > R11$ add some water
 - if $R12 < R11$ add some polyol (glycerin, hexyleneglycol or PEG 800)
5. When RI of both phases are the same proceed with emulsification as: slowly add water phase to oil phase which is mixing with turbulent mixing.
1. The addition of water phase should be 5-10 mins.
1. When the whole of water phase is added, continue mixing for another 10-20 minutes to get thicker gel.

SOURCE: Purac America, Inc.: Dow Corning Formulation

Regenerating Night Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A Polyglyceryl-2 Sesquiosostearate (and) Beeswax (and) Mineral Oil (and) Magnesium Stearate (and) Aluminum Stearate	11.00
Dipentaerthrityl Hexacaprylate/Hexacaprate (and) Tridecyl Trimellitate (and) Tridecyl Stearate (and) Neopentyl Glycol Dicaprylate/Dicaprate	7.00
PEG-2/Dodecyl Glycol Copolymer	1.10
Microcrystalline Wax	2.40
Macadamia Ternfolia Nut Oil	1.00
Cetearyl Isononanoate	7.00
B Safester A-75	1.00
Unitrienol T-27	3.00
Uniphen P-23	0.60
Unipherol U-14	0.30
C Water	54.00
Glycerin	3.00
D Allantoin	0.20
Uniphen P-23	0.40
Magnesium Sulfate-7H ₂ O	0.70
E Unimoist U-125	3.00
F Unicide U-13 (in 10% Water)	4.00
G Fragrance	0.30

Procedure:

Manufacturing is best performed in a closed apparatus (as eg. Fryma, Krieger) provided with vacuum and a speed-regulated stirrer with integrated rotor-stator homogenizer. Care has to be given on the microbiological quality of the deionized water. Manufacturing is performed under vacuum.

1. Melt sequence A while stirring in the machine at 85C. Before emulgating add sequence B immediately (=AB).
2. Sequence D is dissolved separately in sequence C at 85C (=CD).
3. Under vacuum, while stirring at a medium speed and homogenizing at low speed add CD in small portion to AB.
4. Homogenize ABCD 10 min at highest speed and let mixture cool down.
5. At 50C add E and homogenize during 5 min at medium speed.
6. Add at 45C F and at 38C add G. Homogenize at highest speed for 10 min and let mixture cool down.
7. At 25C the mixture can be removed from the machine.

SOURCE: Induchem AG: Formula 1.35

Silk Protein Skin Cream

<u>Raw Materials:</u>	<u>Wt%</u>
Mineral Oil	10.0
Cocoa Butter	2.0
Cetearyl Alcohol & Ceteareth 20	4.0
Emulsifying Wax N.F.	6.0
Stearic Acid	1.0
Glyceryl Monostearate	2.8
Glycerin	2.0
Propylene Glycol	2.0
Mackamide AME-100 (Acetamide MEA)	0.5
Triethanolamine	0.2
Mackpro NSP (Oleyl/Palmityl/Palmitoleamidopropyl/ Silkhydroxypropyl Dimonium Chloride)	1.5
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water, Fragrance	qs to 100.0

Procedure:

1. Melt first nine components in separate container to 75C.
2. In mixing tank, heat water to 78C then add Triethanolamine and Mackpro NSP.
3. Start mixing; add hot mixture of nine components slowly with good agitation; mix for 20 minutes then start cooling.
4. At 50C, add Mackstat DM, D.I. Water, and Fragrance; mix until everything is homogeneous.
5. Adjust pH to 5.4-6.5 with Triethanolamine or acid solution.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Soft Day Cream

<u>Raw Materials:</u>	<u>Wt%</u>
Polysynlane	15.0
Stearic Acid	3.0
Cetanol	1.5
Arlacel 60	2.0
Tween 60	1.0
Propylene Glycol	6.0
Perfume & Preservatives	q.s.
Water	ad. 100.0

SOURCE: Polyesther Corp.: Suggested Formulation

Silk Skin Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A Phase:	
Stearic acid, XXX	5.0
Isopropyl myristate	8.0
Cetyl alcohol	3.0
P.G. monostearate, s.e.	2.0
Myristyl myristate	4.0
Tween 80	1.0
Paraffin wax, 130F	3.0
Propyl paraben	0.1
B Phase:	
NaOH (2% aq. Soln.)	5.0
Glucam E-10	7.0
Silkpro	3.0
Carbopol 940 (2% aq. Soln.)	5.0
Water	53.8
Methyl paraben	0.1

Night Cream

<u>Raw Materials:</u>	<u>Wt%</u>
Polysynlane	15.0
Paraffin Wax	2.0
Lanolin Oil	4.0
Hydrogenated Lanolin	6.0
Beeswax	3.0
Stearic Acid	1.5
Glyceryl Monostearate	2.5
IPM	6.0
PEG-200 Monostearate	2.0
Potassium Hydroxide	0.2
Preservatives & Perfume	q.s.
Water	ad. 100.0

Vanishing Cream

<u>Raw Materials:</u>	<u>Wt%</u>
Stearic Acid	15.0
Cetanol	1.5
Glyceryl Monostearate	N.S.E. 1.5
Polysynlane	7.0
Potassium Hydroxide	0.5
Glycerine	5.0
Perfume & Preservatives	q.s.
Water	ad. 100.0

SOURCE: Polyesther Corp.: Suggested Formulations

Skin Cream

White, creamy, silky shine

Ingredients:

	<u>Wt%</u>
A: Wacker-Belsil PDM 20	3.60
Stearic Acid	4.20
Cetyl Alcohol	1.00
B: Glycerin	2.00
Triethanolamine	0.80
Water	88.40
Preservatives, fragrances, pigments	q.s.

Heat A and B each to 80C, stir A into B.

Temperature stability: at 45C over 10 weeks

Formulation 187/3 AH

Cover Cream

Firm cream with a good covering effect.

Ingredients:

	<u>Wt%</u>
A: Candelilla Wax	5.50
Wacker-Belsil SDM 6022	6.70
B: Stearic Acid	3.00
Water	44.80
Propylene Glycol	3.40
Triethanolamine	1.30
C: Titanium Dioxide	14.00
D: Wacker-Belsil CM 040	18.30
Preservatives, perfume, pigments	q.s.

Heat A and B each to 70C. Mix B into A. Work in C homogeneous-ly. Leave to cool somewhat, stir in D at 30C.

Temperature stability: at 45C over 10 weeks.

Formulation 308AH

SOURCE: Wacker Silicone: Suggested Formulations

Soft Glycerol Cream for Dry and Stressed Skin

<u>Raw Materials:</u>		<u>Wt%</u>
A. Imwitor 377 (Glyceryl Laurate/Citrate/Lactate)		5
Imwitor 900 (Glyceryl Stearate)		4
Miglyol 812 (Caprylic/Capric Triglyceride)		5
Petrolatum		5
Cetyl Alcohol		4
B. Glycerol		5
Keltrol F (Xanthane based hydrogel builder)		0.5
Preservative		q.s.
Water up to	100	
C. Fragrance		q.s.

Preparation:

A is heated to about 70-80C, B is stirred together and brought to the same temperature. B is emulsified into A. C is added at about 30C.

Night Cream

<u>Raw Materials:</u>		<u>Wt%</u>
A. Imwitor 780K (Isostearyl Diglyceryl Succinate)		6
Miglyol Gel B		10
Dynacerein 660 (Oleyl Erucate)		10
B. Mowiol 10-98 (Polyvinyl Alcohol Copolymer)		2
Magnesium Sulphate		2
Preservative		q.s.
Water ad	100	
C. Fragrance		q.s.

Preparation:

A is mixed and heated up to approx. 75C. B is brought to the same temperature and emulsified into A. C is added at about 30C.

Nutrition Cream

<u>Raw Materials:</u>		<u>Wt%</u>
A. Imwitor 780K (Isostearyl Diglyceryl Succinate)		5
Miglyol Gel B		20
Wheat Germ Oil		3
Paraffin		3
Mineral Oil		8
B. Preservative		q.s.
Magnesium Sulphate		2
Water ad	100	
C. Fragrance		q.s.

Preparation:

A is warmed up to about 75C. B is brought to the same temperature and emulsified into A. C is stirred in at about 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Tube-Dispensed Hand Cream

A tube dispensed hand cream utilizing SF96 (1000), dimethicone, to provide lubricity and a smooth feel. SF96 (1000) also provides anti-whitening properties as well as skin protection. The use of dimethicone in this formulation falls within the requirements of the FDA monograph for OTC skin protectant products.

Ingredient/Function:Wt%

Part A:

Dimethicone [SF96(1000)](1)/Protectant/Anti-whitening	2.50
Isopropyl Myristate/Emollient	2.00
Stearic Acid/Thickener/Emulsifier	7.00
Lanolin/Emollient	0.50
Emulsifying Wax NF(2)/Emulsifier	4.00
Sorbitan Oleate/Co-emulsifier	0.50
Polysorbate-60/Emulsifier	2.50

Part B:

Propylene Glycol/Humectant	7.00
Deionized Water/Diluent	66.00
Magnesium Aluminum Silicate(3)(5% aqueous dispersion)/Thixotropic thickener	8.00

Part C:

Fragrance	q.s.
Preservative	q.s.

Procedure:

1. Prepare a 5% magnesium aluminum silicate dispersion using a homogenizer. Mix the dispersion for 20 minutes.
2. Mix together Part B water and 5% dispersion of magnesium aluminum silicate using a propeller mixer. Heat to 70C.
3. Add propylene glycol and mix for 5 minutes.
4. Weigh Part A ingredients into a separate vessel, mix and heat to 70C.
5. Add Part A to Part B with good propeller agitation. Mix 10 minutes at 70C.
6. Slow mixing and begin cooling.
7. At 40C or less, blend in part C.

Suppliers:

- (1) GE Silicones
- (2) Croda, Inc.
- (3) R.T. Vanderbilt Co., Inc.

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 101

Vanishing CreamRaw Materials:Parts by Wt.

Part I:

Rosswax 63-0412	(1)	6.0
Ross Spermaceti Wax Sub. 573	(1)	9.0
Amerlate P	(2)	1.0
Emerest 2314	(3)	1.0
Emerest 2316	(3)	1.0
Glycerol Monostearate SE	(4)	1.0
Emery 916 Pure Glycerine	(3)	5.0
Dow Corning 200 Fluid 100 Cst	(8)	1.0
Drakeol Mineral Oil 35	(7)	1.0

Part II:

Water		69.0
Triethanolamine		1.0
Aloe Vera Liquid (1:1)	(6)	2.0
Maltrin MO40	(5)	1.0

Part III:

Germaben IIE	(9)	1.0
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Part IV:

Fragrance	(10)	q.s.
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Procedure:

In separate heated vessels heat both Part I and Part II to 170F with agitation. When the temperature is reached add Part II to Part I with continued agitation. Next add Part III to the batch. Reduce the temperature to 140F and add Part IV. Continue to cool down to 125F and pack into containers.

Suppliers:

(1) Frank B. Ross Co.	(6) Madis Laboratories
(2) Amerchol	(7) Penreco
(3) Henkel-Emery	(8) Dow Corning
(4) Stepan Chemical	(9) ISP-Van Dyk
(5) Grain Processing	(10) Robertet-Novarome

SOURCE: Frank B. Ross Co., Inc.: Formula No. 286

Waterfree Massage Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan 378 (Caprylic/Capric/Stearic Triglyceride)	50
Miglyol 812 (Caprylic/Capric Triglyceride)	20
Petrolatum	20
Mineral Oil	10
B. Fragrance	q.s.

Preparation:

A is completely melted and stirred cold. B is stirred in at about 40C. Homogenisation is convenient prior to filling.

Fat Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Alugel DF 30	2
Petrolatum	11
B. Softisan 378 (Caprylic/Capric/Stearic Triglyceride)	11
Imwitor 780K (Isostearyl/Diglyceryl Succinate)	10
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Beeswax	2
C. Preservative	q.s.
Water ad	100
D. Fragrance	q.s.

Preparation:

A is heated to about 90C until gelling. B is melted at about 75C and slowly added to A. C is also heated to about 75C and emulsified into A+B. D is added at approximately 40C.

Chamomile Handcream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan 601	38
Miglyol 829 (Caprylic/Capric/Succinic Triglyceride)	6
Paraffin	3
B. Karion F	5
Propylene Glycol	3
Extrapon Kamille Spezial	2
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is heated to about 75C. B is brought to the same temperature and emulsified into A. Stir cold to about 30C and then add C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Section VI

Hair Care Products

Alcohol-Free No Voc Hair Spray Formulation

A commercially-proven medium-hold no-voc pump formulation for the rapidly emerging alcohol-free hair spray arena. This non-flaking formulation will not dry out the hair like conventional hair sprays and is ultra-environmentally friendly.

Ingredients:

	<u>Wt%</u>
Water	84.46
AMP Regular	0.99
50% Acylates Copolymer	14.00
Monawet MO-70R	0.30
Glycerin	0.25

AMP=Aminomethylpropanol

Acrylates Copolymer=Balance 0/55

Procedure:

Combine ingredients in order shown with mild agitation. Add fragrance and preservative. Package in pump hair spray container.

Typical Properties:

pH: 8.5

Viscosity: 8 cps

Appearance: Clear

SOURCE: Mona Industries, Inc.: Formula F-833

Hair PomadeIngredients/CTFA Name:

	<u>Wt%</u>
Petrolatum	66.2
Schercemol DID/Diisopropyl Dimer Dilinoleate	20.0
Schercemol BE/Behenyl Erucate	9.0
Cetyl Alcohol	4.2
Propylparaben	0.1
Fragrance	0.5
Colors	q.s.

Procedure:

Heat all ingredients gently in a water bath or hot plate to 65C. Gently mix to 50C. Pour into containers.

SOURCE: Scher Chemicals, Inc.: Formula SK 141

Apricot Hair Conditioner

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Schercoquat APAS (90%)/Apricotamidopropyl Ethyldimonium Ethosulfate	3.0
Cetyl Alcohol	2.0
Schercomid AME (70%)/Acetamide MEA	6.0
Schercemol GMIS/Glyceryl Monoisostearate	4.0
Herbasol Extract Apricot	0.5
Preservative	0.2
Color, Fragrance	q.s.
Water	84.3

Procedure:

Blend and heat to 70C Schercoquat APAS, Cetyl Alcohol, Schercomid AME and Schercemol GMIS.

Slowly add water at 70C to the blend and mix until uniform.

Add extract, preservative and fragrance and mix until uniform.

Formula SK 146

Wheat Germ Hair Conditioner

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Schercoquat WOAS (90%)/Wheat Germ Amidopropyl Ethyldimonium Ethosulfate	1.0
Schercemol PEG 400 DS/PEG 8 Distearate	4.0
Cetyl Alcohol	2.0
Schercomid AME (70%)/Acetamide MEA	6.0
Schercemol GMIS/Glyceryl Isostearate	4.0
Herbasol Extract Wheat Germ/Wheat Germ Extract	0.5
Preservative	0.2
Color, Fragrance	q.s.
Water	82.3

Procedure:

1. Blend and heat to 70C Schercoquat WOAS, Schercemol PEG 400 DS, Cetyl Alcohol, Schercomid AME and Schercemol GMIS.

2. Slowly add water at 70C to the blend and mix until uniform.

3. Add extract, preservative & fragrance & mix until uniform.

Formula SK 149

SOURCE: Scher Chemicals, Inc.: Formulas SK 146 and SK 149

Balsam Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackine 301 (Stearamidopropyl Dimethylamine)	1.6
Cetyl Alcohol	1.8
Phosphoric Acid (85%)	0.9
Sodium Chloride	0.3
Mackstat DM (DMDM Hydantoin)	qs
Balsam of Peru	qs
Water, Dye	qs to 100.0

Procedure:

1. Add first four components to water.
2. Heat to 70C.
3. Blend until homogeneous.
4. Cool to 45C and add Mackstat DM and Balsam of Peru.
5. Cool to room temperature.

Clear Conditioner with Wheat Germ Cationic

<u>Raw Materials:</u>	<u>Wt%</u>
Mackalene 716 (Wheatgermamidopropyl Dimethylamine Lactate)	1.0
Hydroxyethylcellulose	1.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Completely disperse Hydroxyethylcellulose in cold water.
2. Heat to 45C and add Mackalene 716.
3. Adjust pH to 5.0 with Lactic Acid.
4. Blend until clear.
5. Add remaining components.
6. Cool to room temperature.

Clear Leave-On Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	6.0
Hydroxyethylcellulose	1.0
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Completely disperse Hydroxyethylcellulose in cold water.
2. Add Mackalene 426.
3. Blend until clear.
4. Heat to 40C.
5. Add remaining components.
6. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Clear Conditioner for Daily Use

This light rinse-off clear conditioner contains SME253 which is a 20% Trimethylsilylamodimethicone micro emulsion with particle size less than 20nm. It has been designed for global markets. All components of SME253 comply with regulations related to personal care products in the U.S., European Union, Canada and China. This formulation remains clear upon adding SME253 with excellent conditioning effects which are soft, smooth, and silky feel.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	90.15
Hydroxyethylcellulose/Thickener	1.50
Glycerin/Humectant	2.00
Methylparaben/Preservative	0.20
Propylparaben/Preservative	0.10
Part B:	
Cetrimonium Chloride (28-30%)/Conditioner	3.00
Methylchloroisothiazolinone (and) Methylisothiazolinone(1)/Preservative	0.05
Trimethylsilylamodimethicone (and) C11-15 Pareth-7 (and) C12-16 Pareth-9 (and) Glycerin (and) Trideceth-12(SME253)(2)/Conditioner	3.00

Procedure:

1. Heat water, glycerin, methylparaben, propylparaben at 65C. Slowly add Hydroxyethylcellulose and mix until uniform.
2. Cool the batch down to 45C and add Part B as the order listed.

Daily Use Conditioner for Normal to Dry HairIngredients/Function:

	<u>Wt%</u>
Water/Diluent	86.00
Dimethiconol(SM2765)(1)/Conditioning agent	5.00
Quaternium-27/Antistatic agent and conditioner	3.30
Stearyl Alcohol/Emulsifier	3.00
Glyceryl Stearate/Thickener	1.50
Propylene Glycol/Humectant	1.00
Germaben II/Preservative	0.20

Procedure:

1. Melt together Glyceryl Stearate and Stearyl Alcohol.
2. Separately combine Water, Quaternium-27, Propylene Glycol and Germaben II with moderate propeller agitation. Heat to 65C.
3. When both phases are at the same temperature, add wax phase to aqueous phase with rapid agitation for approximately 5 minutes. Remove heat and reduce stir speed to moderate. Continue mixing.
4. Add dimethiconol emulsion under 45C and continue stirring until cool.

SOURCE: GE Silicones: Formulas CP 113 and CP 116

Conditioner for Dry/Damaged Hair with SM2101

This conditioner is designed for daily use on dry/damaged hair. SM2101 is an effective conditioner for hard-to-condition hair due to its high level of substantivity, yet is readily removed and does not result in build-up.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	76.40
Propylparaben/Preservative	0.10
Methylparaben/Preservative	0.20

Part B:	
Behentrimonium Methosulfate (and) Cetearyl Alcohol(1)/ Conditioner/Emulsifier	2.70
Pentaerythrityl Tetrastearate(2)/Thickener	1.50
Cetyl Alcohol/Refatting agent/Emulsifier	2.30
Stearamidopropyl Dimethylamine/Conditioner	2.50

Part C:	
Trimethylsilylamodimethicone (and) Isolaureth-6 (and) Octoxynol-40 (SM2101)(3)/Conditioner	5.00
FD&C Yellow No. 5 (1.0% solution)/Color	0.30

Part D:	
Polysorbate-80/Emulsifier/Solubilizer	1.50
Glycerin/Humectant	2.75
Fragrance (4)	0.50
Tocopherol/Vitamin E/Antioxidant	0.05

Part E:	
Cyclomethicone (SF1204)(3)/Wet combing	4.20

Procedure:

1. Dissolve parabens in water and heat with moderate propeller agitation to 65C.
2. Melt together Part B ingredients and add to the water phase. Remove heat and continue stirring 15-20 minutes.
3. Mix together Part C and add to Part AB. Stir approximately 15 minutes.
4. Mix together Part D; add to batch below 40C with moderate stirring for 15 minutes. Add SF1204 cyclomethicone and continue stirring for an additional 10-15 minutes.

Trade Names/Suppliers:

- (1) Incroquat Behenyl TMS, Croda, Inc.
- (2) Crothix, Croda, Inc.
- (3) GE Silicones
- (4) Fragrance J-6636, Bell Fragrances & Flavors

SOURCE: GE Silicones: Personal Care Formulary: Formula CP 102

Conditioning Color Sealant for Temporary Hair Dyes

SM2115 is a microemulsion of an amine functionalized silicone polymer of high amine content. Due to its small particle size and high amine content, it is extremely substantive to hair and provides intensive conditioning. In addition, SM2115 acts as a color sealant, providing protection against wash-out of temporary dyes.

Ingredient/Function:Wt%

Part A:

Deionized Water/Diluent	88.10
Quaternium-15/Preservative	0.20
Stearamidopropyl Dimethylamine/Conditioner	0.50
Acetic Acid/pH adjuster	0.19
Sodium Acetate/Buffer	0.11

Part B:

Fragrance	0.75
Octoxynol-40/Surfactant	0.85
Isolaureth-6/Surfactant	1.96
Glycerin/Humectant	1.09

Part C:

Trimethylsilylamodimethicone (and) Octoxynol-40 (and) Isolaureth-6 (and) Glycerin (SM2115) (1)/Color sealant/ Conditioner	6.25
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Procedure:

1. Combine Part A with moderate propeller agitation and heat to 60C. Continue stirring for 15 minutes. Remove from heat.
2. Combine Part B ingredients and add to Part A with moderate propeller agitation.
3. Slowly add Part C to Part AB and continue mixing 15 minutes.

Trade Names/Suppliers:

(1) GE Silicones

Formula CP 112

Cuticle Coat with Enhanced Shine

An excellent leave-in conditioner similar to the cuticle coat formulation CP 106, with the addition of SF1550 to enhance shine.

Ingredient/Function:Wt%

Cyclopentasiloxane (and) Dimethicone (SF1214)(1)/ Conditioning	60.0
Phenyl Trimethicone (SF1550) (1)/Shine	30.0
Isohexadecane/Carrier/Dry time	10.0
Fragrance	q.s.

Procedure:

1. Mix together SF1214 and isohexadecane until uniform.
2. Slowly add SF1550 to isohexadecane mixture and continue mixing for 15 minutes.
3. Add fragrance and color as desired, stirring well.

Trade Names/Suppliers: (1) GE Silicones
Formula CP107

SOURCE: GE Silicones: Personal Care Formulary: Formulations

Conditioning Pretreatment for Chemical Processing

SM2115 is a microemulsion of an amine functionalized silicone polymer with a high amine content. It is extremely substantive to hair and provides conditioning which is substantive through chemical processing, making this product an ideal pretreatment for perms, dyes, bleaching, and relaxers. Hair feels soft, conditioned and less damaged even after chemical processing.

Ingredient/Function:Wt%

Part A:

Deionized Water/Diluent	85.10
Quaternium-15/Preservative	0.20
Acetic Acid/pH adjustment	0.19
Sodium Acetate/Buffer	0.11

Part B:

Fragrance	0.50
Octoxynol-40/Surfactant	0.85
Isolaureth-6/Surfactant	1.96
Glycerin/Humectant	1.09

Part C:

Trimethylsilylamodimethicone (and) Octoxynol-40 (and) Isolaureth-6 (and) Glycerin (SM2115)/Conditioner	10.00
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Procedure:

1. Combine Part A with moderate propeller agitation and heat to 60C. Continue stirring for 15 minutes. Remove from heat.
 2. Combine Part B ingredients and add to Part A with moderate propeller agitation.
 3. Slowly add Part C to Part AB and continue mixing 15 minutes.
- Formula CP 111

Hair Gloss Spray

A leave-in conditioner which can be sprayed onto the hair and used throughout the day to provide shine and conditioning. SF1550 provides gloss and sheen to the hair, while SF1202 makes the product fast-drying without an oily residue.

Ingredient/Function:Wt%

Phenyl Trimethicone (SF1550)(1)/Shine/Conditioning	10.0
Cyclopentasiloxane (SF1202)(1)/Fast dry/Conditioning	90.0
Color	q.s.
Fragrance	q.s.

Procedure:

1. Mix together SF1550 and SF1202 until uniform.
2. Add color and fragrance as desired with stirring.

Trade Names/Suppliers:

(1) GE Silicones

Formula CP108

SOURCE: GE Silicones: Personal Care Formulary

Cream Hair Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Part A:	
Oleyl Alcohol	10.0
Cetyl Alcohol	2.5
Mackester SP (Glycol Stearate (and) Stearamide MEA)	3.0
BHA	0.1
Propylparaben	0.1

Part B:	
Mackalene 316 (Stearamidopropyl Dimethylamine Lactate)	25.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Heat Part A components to 70C.
2. Add Mackalene 316 to water and heat to 70C.
3. Add Part A to Part B and with continuous blending, cool to 45C
4. Add remaining components.
5. Cool to room temperature.

Conditioner and Setting Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
Mackalene 316 (Stearamidopropyl Dimethylamine Lactate)	4.0
Gafquat 755	8.0
Cetyl Alcohol	0.5
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Completely disperse Gafquat 755 in water.
2. Add Mackalene 316 and Cetyl Alcohol.
3. Heat to 70C.
4. Blend until completely homogeneous.
5. Cool to 45C and add remaining components.
6. Cool to room temperature.

Curl Conditioner and Oil Sheen

<u>Raw Materials:</u>	<u>Wt%</u>
Glycerine	47.0
Propylene Glycol	3.0
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	4.0
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfosuccinate)	3.0
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water	qs to 100.0

Procedure:

1. Add components in order.
2. Blend until clear.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Cream Rinse

<u>Recipe:</u>	<u>Wt%</u>
A Genamin KDMP/Behentrimonium Chloride	2.00
Hostaphat KL 340 N/Trilaureth-4 Phosphate	1.50
Cetyl alcohol	2.00
Mineral oil, high viscosity	2.00
B Water	92.70
Preservative	q.s.
C Fragrance	0.30
Dyestuff solution	q.s.
D Citric acid-->pH 4.0	q.s.

Procedure:

1. Melt A at approx. 75C.
 2. Heat B to approx. 75C.
 3. Stir 2 into 1.
 4. Stir until cool.
 5. At approx. 35C add the components of C to 4.
 6. Finally adjust the pH with D.
- Formula B II/1055

Cream Rinse

<u>Recipe:</u>	<u>Wt%</u>
A Genamin CTAC/Cetrimonium Chloride	6.00
Hostaphat KML/Laureth-4 Phosphate, Polyglyceryl-2	
Sesquiosostearate	1.20
Cetylstearyl alcohol	3.00
Mineral oil	1.00
B Water	88.20
Preservative	q.s.
C Fragrance	0.30
Panthenol	0.30
Dyestuff solution	q.s.
D Citric acid-->pH 4.0	q.s.

Procedure:

1. Melt A at approx. 75C.
 2. Heat B to approx. 75C.
 3. Add 2 under stirring to 1. Stir until cool.
 5. At approx. 35C add the components of C.
 6. Adjust the pH with D.
- Formula B II/1067

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Cream Rinse

<u>Recipe:</u>	<u>Wt%</u>
A Genamin EQ/Distearoylethyl Dimonium Chloride	2.00
Hostacerin DGSB/PEG-4 Polyglyceryl-2 Stearate	1.20
Hostacerin DGI/Polyglyceryl-2 Sesquiisostearate	1.00
Cetyl alcohol	1.80
Almond oil	1.00
B Tylose H 10000/Hydroxyethylcellulose	0.20
C Water	91.80
D Fragrance	0.30
Panthenol	0.50
Extrapon Henna	0.20
Preservative	q.s.
Dyestuff solution	q.s.
E Citric acid-->pH 4.0	q.s.

Procedure:

1. Melt A at approx. 75C.
 2. Stir B into C, heat it to approx. 75C.
 3. Add 2 under stirring to 1.
 4. Stir until cool.
 5. At approx. 35C add the components of D.
 6. Adjust the pH with E.
- Formula B II/1063

Cream Rinse

<u>Recipe:</u>	<u>Wt%</u>
A Genamin STACP/Steartrimonium Chloride	1.50
Genamin CTAC/Cetrimonium Chloride	1.00
Hostacerin DGSB/PEG-4 Polyglyceryl-2 Stearate	1.20
Cetylstearyl alcohol	2.50
B Tylose H 10000/Hydroxyethylcellulose	0.50
C Water	92.20
D Fragrance	0.30
Panthenol	0.30
Extrapon Henna	0.50
Preservative	q.s.
Dyestuff solution	q.s.
E Citric acid-->pH 4.0	q.s.

Procedure:

1. Melt A at approx. 75C.
 2. Stir B into C, heat to approx. 75C.
 3. Add 2 under stirring to 1. Stir until cool.
 4. at approx. 35C add the components of D.
 5. Adjust the pH with E.
- Formula B II/1066

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Cream Rinse Conditioner

This cream rinse formula features Crodafos CES, a conditioning and emulsifying system from Croda, together with a cationic conditioner, Incroquat CTC-30. By its ability to promote fast release of oils and conditioning agents to the hair and its compatibility with quaternary conditioners, Crodafos CES enables this cream rinse to provide enhanced conditioning effects. Increased sheen, silkier, softer feel, and improved texture. The product rinses out extremely easily without incidence of drag or a waxy deposit.

Ingredients:**Weight%****Part A:**

Crodafos CES (Cetearyl Alcohol (and) Cetearyl Phosphate)	6.0
Crodacol CS-50 (Cetearyl Alcohol)	1.5
Super Refined Wheat Germ Oil (Wheat Germ Oil)	2.0
Crodamol OS (Octyl Stearate)	2.0
Crodamol OPG (Octyl Pelargonate)	2.0

Part B:

Deionized Water	83.65
Incroquat CTC-30 (Cetrimonium Chloride)	1.50
TEA 99%	0.35

Part C:

Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben	1.00
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pH=5.5+-0.5

Viscosity=18,500cps+-10% (Spindle TD @ 10 RPM @ 25C)

Procedure:

Combine ingredients of Part A with mixing and heat to 75-80C. Combine ingredients of Part B with mixing and heat to 75-80C. Add Part B to Part A with mixing and cool to 50C. Add Part C while mixing and cool to desired fill temperature.

N.A.T.C. Approved

SOURCE: Croda Inc.: Formulation HP-181

Daily Protection Spray

Designed for use on damp hair after showering, at the beach or by the poolside, this Daily Protection Spray contains a trio of ingredients that can protect hair from sun damage or blow-dryer burnout. Crodasone W is a heat-activated protein/silicone copolymer and provides thermal protection that helps prevent hair from becoming heat-damaged by styling appliances. Incroquat UV-283 guards against UVB damage caused by the sun. Hydrosesame AA provides moisturizing benefits throughout the day.

<u>Ingredients:</u>	<u>Wt%</u>
Part A:	
Deionized Water	94.0
Crodasone W (Hydrolyzed Wheat Protein Hydroxypropyl Polysiloxane)	1.0
TEA	q.s.
Crovol PK-70 (PEG-45 Palm Kernel Glycerides)	2.0
Part B:	
Hydrosesame AA (Sesame Seed Amino Acids)	1.0
Incroquat UV-283 (Cinnamidopropyltrimonium Chloride)	1.0
Part C:	
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben/Germaben II	1.0
pH: 4.6+-0.5	

Procedure:

Combine first two ingredients of Part A with mixing. Continue mixing and add TEA until pH is 5.5, at which point mixture will become clear. Add remaining ingredient of Part A and mix well. Add ingredients of Part B individually with mixing. When uniform add Part C and mix until ready to fill.
Formula HP-202

Leave-On Detangling Spray

This formula is an easy cold-mix system and is designed to highlight the detangling effects and wet combing properties of Incroquat Erucyl HE. Hydrotritricum WAA is used to moisturize the hair, and the copolyol, to add shine.

<u>Ingredients:</u>	<u>Wt%</u>
Deionized Water	94.5
Incroquat Erucyl HE (Hydroxyethyl Erucamidopropyl Dimonium Chloride)	3.0
Hydrotritricum WAA (Wheat Amino Acids)	1.0
Dimethicone Copolyol/D.C. Surfactant 193	0.5
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben/Germaben II	1.0
pH: 5.6+-0.5	

Procedure:

Combine ingredients in order given and mix until clear and uniform. Fill.
Formulation HP-200

SOURCE: Croda, Inc.: Suggested Formulations

Deep Conditioning Curl Enhancing SprayIngredients/CTFA Name:

	Wt%
A) SDA 40 Alcohol	25.00
Herbasol Extract Chamomile/Chamomile Extract	5.00
Schercoquat DAS/Quaternium 61	1.00
Schercoquat IAS/Isostearamidopropyl Ethyldimonium Ethosulfate	1.00
Dow Corning 193 Surfactant/Dimethicone Copolyol	1.50
Germall 115	0.20
Fragrance	q.s.
B) Water, distilled or deionized	66.30

Procedure:

1. Disperse each ingredient in Part A in alcohol, one at a time, stirring until clear after each addition.

2. Add water.

Formula SK 153

Oil Free Clear Hair ConditionerIngredients/CTFA Name:

	Wt%
Schercomid AME-70/Acetamide MEA	10.0
Arlasolve 200/Isoceteth-20	3.0
Schercoquat 21AP/Bis Isostearamidopropyl Hydroxypropyl Diammonium	1.0
PEG-400/PEG-8	3.0
Water	82.5
Fragrance	0.1
Glycolic Acid (70% Tech)	0.4
Preservative	qs

Procedure:

1. Heat water to 40-50C. With stirring, add Schercoquat 21AP until it is dissolved.

2. With continuous agitation, add Schercomid AME-70, Arlasolve 200, and PEG-400.

3. Adjust pH if necessary to 4.5 with Glycolic Acid.

4. QS with fragrance and preservative.

Formula SK 154

SOURCE: Scher Chemicals, Inc.: Formulas SK 153 and SK 154

Easy to Manufacture Creme Rinse

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet CBC (Cetyl Alcohol (and) Stearyl Alcohol (and) Stearalkonium Chloride (and) Dimethyl Stearamine (and) Lactic Acid)	4.0-6.0
Potassium Chloride	qs
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Heat water to 70C.
2. Add Mackadet CBC and mix until completely dispersed.
3. Adjust pH as needed with Citric Acid.
4. Cool to 50C and add Paragon III, Dye and Fragrance.
5. Adjust viscosity with Potassium Chloride if necessary.
6. Cool and fill.

Spray Detangler for Children

<u>Raw Materials:</u>	<u>Wt%</u>
Mackpro WLW (Wheatgermamidopropyl Hydroxypropyl Dimonium Hydrolyzed Wheat Protein)	1.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	3.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add components to water.
2. Heat to 40C and blend until clear.

Natural Lipid Styling Mousse

<u>Raw Materials:</u>	<u>Wt%</u>
PVP/VA E335	4.5
SDA 40 Alcohol	21.5
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	4.0
D.I. Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Combine components and blend until clear.
2. Pressurize with suitable propellant.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Hair Balm with Repair Effect

<u>Raw Materials:</u>		<u>Wt%</u>
A. Softisan 601		18
Marlpal 1618/25 (Cetareth-25)		5
Softisan 645		5
Mineral Oil		6
Castor Oil		3
Aloe Vera Lipo Quinon		1
B. Glycerol		5
Propylene Glycol		3
Preservative		q.s.
Water ad		100
C. Extrapon Phytostimulin Spezial		3
Placenta liquid, water soluble		3
D. Fragrance		q.s.

Preparation:

A is heated to about 75C. B is brought to the same temperature and emulsified into A. C is added at about 30C.

Hair Fixative

<u>Raw Materials:</u>		<u>Wt%</u>
Softigen 767		1.5
Luviskol VA 64 (PVA-VA Copolymer)		2
Isopropanol or Ethyl Alcohol		38
Lactic acid		1
Fragrance		q.s.
Water ad		100

Preparation:

All ingredients are mixed and stirred homogeneously.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Hair Conditioner for Damaged Hair

SM2115 is a substantive amine functional emulsion, 20% active, which is particularly good for damaged, chemically processed or hard-to-condition hair. At low levels, it can be used in daily use products, providing softness, shine and body. Build-up is a concern at higher levels.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Ceteareth-20/Emulsifier	1.0
Stearyl Alcohol/Refatting agent/Emulsifier/Thickener	2.0
Stearamidopropyl Dimethylamine/Conditioner	0.8
Quaternium-18/Conditioner	1.4
Cyclomethicone (SF1202)(1)/Wet-combing/Quick dry time	3.0
Part B:	
Water	89.7
Part C:	
Trimethylsilylamodimethicone (and) Octoxynol-40 (and) Isolaureth-6 (and) Glycerin (SM2115)(1)/Conditioner/ Shine	2.0
Methylchloroisothiazolinone (and) Methylisothiazolinone (2)/Preservative	0.1

Procedure:

1. Preheat Part A to 75C.
2. Preheat the water in Part B, to 75C.
3. Add Part B to Part A with moderate agitation.
4. Cool with agitation to 40 to 50C.
5. Blend in SM2115.
6. Blend in the preservative.
7. Cool to room temperature.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Kathon, Rohm and Haas

SOURCE: GE Silicones: Personal Care Formulary: Formula CP 101

Hair Conditioner for Superior Body

SF1214 is a blend of cyclopentasiloxane and high molecular weight dimethicone. It provides wet combing plus imparts body, softness and shine. The high molecular weight dimethicone smooths damaged, split ends.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Ceteareth-20/Emulsifier	0.5
Steareth-20/Emulsifier	0.5
Stearyl Alcohol/Refatting agent/Emulsifier/Thickener	2.0
Stearamidopropyl Dimethylamine/Conditioner	0.8
Dicetyldimonium Chloride/Conditioner	1.5
Part B:	
Water	92.6
Hydroxyethylcellulose (1)/Thickener	0.5
Part C:	
Dimethicone (and) Cyclopentasiloxane (SF1214)(2)/Conditioner	1.5
Methylchloroisothiazolinone (and) Methylisothiazolinone (3)/Preservative	0.1

Procedure:

1. Mix together Part A. Preheat to 75C.
2. Separately mix together the water and the hydroxyethylcellulose. When the hydroxyethylcellulose is dissolved, preheat to 75C.
3. Add Part B to Part A with moderate agitation.
4. Cool with agitation to 60 to 65C.
5. Blend in the SF1214.
6. Cool to 40 to 50C and add the preservative.
7. Cool to room temperature.

Comments:

For thin, straight hair, use only 1% dicetyldimonium chloride. Increase the stearyl alcohol wt% for a thicker system.

Trade Names/Suppliers:

- (1) Natrosol 250 HHR, Aqualon
- (2) GE Silicones
- (3) Kathon, Rohm and Haas

SOURCE: GE Silicones: Personal Care Formulary: Formula CP 100

**Hair Conditioner with Moisturizers and Quaternium-79
Hydrolyzed Collagen**

<u>Raw Materials:</u>	<u>Wt%</u>
Cetearyl Alcohol	3.0
Mackernium SDC-85 (Stearalkonium Chloride)	3.0
Propylene Glycol	1.0
Glycerin	1.0
Mackamide AME-100 (Acetamide MEA)	1.0
Mineral Oil	1.0
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	2.0
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water, Dye, Fragrance	qs to 100.0

pH: 3.5-4.5

Viscosity (cps 25C): 1500-3000

Procedure:

1. Melt waxes and oils to 70C.
2. Separately heat water plus Mackpro NLP to 70C.
3. Add hot water solution to hot waxes and oils.
4. Start stirring vigorously for 10 minutes. Then start slow cooling while mixing.
5. At 40C, add Mackstat DM then Dye and Fragrance; slow mixing down close to room temperature and stop mixing at 30C.
6. Adjust pH to 3.5-4.5 with Citric Acid.

Natural Lipid Conditioner for Professional Salon

<u>Raw Materials:</u>	<u>Wt%</u>
Mackernium SDC-85 (Stearalkonium Chloride)	1.5
Mackalene NLC (Oleamidopropyl Dimethylamine Lactate (and) Palmitamidopropyl Dimethylamine Lactate (and) Palmitoleamidopropyl Dimethylamine Lactate)	1.0
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	2.0
Cetearyl Alcohol	1.8
Steareth-2	1.8
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add first five components to water.
2. Heat to 70C.
3. Cool to 45C and add remaining components.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Hair Defining Complex

Styling aid and anti-frizz oil-in-water/water-in-oil emulsion containing Bentone Gel M10 rheological additive.

<u>Ingredients:</u>	<u>Wt%</u>
Polyvinylpyrrolidone Vinyl Acetate Copolymer	2.0
Cetearyl Alcohol, Behenyl Trimonium Methosulphate	4.0
Cyclomethicone, Dimethiconol	10.0
Glycerin 99.5%	4.0
Perfume	0.3
Methyldibromoglutaronitrile	0.2
and Propylene Glycol	0.4
Bentone Gel M10	1.0
Sodium Hydroxide	qs to pH 5.5
Demineralized Water	Bal to 100%

Method of Manufacture:

1. Heat the Bentone Gel M10 and Cetearyl Alcohol, Behenyl Trimonium Methosulphate to 75-80C.
2. In a separate vessel, heat the water, glycerine and Polyvinylpyrrolidone Vinyl Acetate Copolymer to 75-80C.
3. Add the two phases together with high shear stirring.
4. Add the Cyclomethicone, Dimethiconol.
5. At 50C, transfer to a propeller stirrer and continue to cool.
6. At 30C, add the perfume and preservative.

Applied sparingly to towel-dried, wet, freshly shampooed hair prior to drying, this formulation containing Bentone Gel M10 at 1% provides noticeable benefits. Direct comparisons against the same formulation without the gel reveals enhanced application, curl definition and style management in salon half-head studies. Without the gel the product sits on the wet hair rather than dissipates into it.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Hair Nourishing Treatment

This formula contains a mixture of Croda ingredients, each of which has 'nourishing' effects that help keep hair looking healthy and shiny. Hydrolupin AA is a plant-based amino acid complex that can moisturize hair from within. Cropure Wheat Germ and Solan 50 both add emolliency. Hydrotriticum QM is a substantive wheat protein with enhanced conditioning. Incroquat Behenyl TMS provides dual action, acting as a detangling aid, as well as the emulsifier.

<u>Ingredients:</u>	<u>Wt%</u>
Part A:	
Incroquat Behenyl TMS (Behentrimonium Methosulfate (and) Cetearyl Alcohol)	4.00
Cropure Wheat Germ (Wheat Germ Oil)	1.00
Crodacol C-70 (Cetyl Alcohol)	0.50
Part B:	
Deionized Water	83.40
Propylene Glycol	5.00
Solan 50 (PEG-60 Lanolin)	1.00
Part C:	
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben/Germaben II	1.00
Part D:	
Panthenol/DL-Panthenol Liquid, 50%	2.00
Hydrolupin AA/Lupin Amino Acids	1.00
Hydrotriticum QM (Cocodimonium Hydroxypropyl Hydrolyzed Wheat Protein)	1.00

pH: 6.0+-0.5

Viscosity: 2,530 cps+-10% (RVT Spindle #3 @ 10 rpm)

Procedure:

Combine ingredients of Part A with mixing and heat to 75C. Combine ingredients of Part B with mixing and heat to 75C. Add Part A to Part B with mixing and cool to 50C. Add Part C with mixing and cool to 40C. Add Part D ingredients individually, mixing well. Cool to 25C and adjust pH to 6.0 with a 10% solution of NaOH.

SOURCE: Croda Inc.: BFGoodrich: Formulation HP-203

Hair PomadeRaw Materials:

	Wt%
Witco White Petrolatum	35.0
Ross Microcrystalline Wax 1275WH	21.0
Ross Microcrystalline Wax 1275W	12.0
Ross Microcrystalline Wax 1329/1	12.0
Finetex Finsolv TN	2.5
Penreco Drakeol #7 Mineral Oil	17.5

Mixing Procedures:

Heat the waxes and the petrolatum in a steam jacketed kettle to 230F. In a separate kettle heat the oils to 200F. Next add the oils to the waxes and agitate down to 225F. Continue to agitate at this temperature for at least 30 minutes. (Note: Time of agitation will change as the batch size changes). Next cool the batch to 165F and pour into containers.

Formula #201

Hair PomadeRaw Materials:

	Wt%
Witco Petrolatum	35.0
Ross Microcrystalline Wax 1275WH	21.0
Ross Microcrystalline Wax 1329/1	24.0
Finetex-Finsolv TN	2.5
Penreco Drakeol #7 Mineral Oil	17.5

Procedure:

Melt the first three waxes to 185F in a steam jacketed vessel and add the last two ingredients that have been heated to 140F in a separate vessel to the wax base under agitation. Cool to 158F and package.

Formula No. 153

SOURCE: Frank B. Ross Co., Inc.: Suggested Formulations

Hair Rinse with Dehyquart L 80

<u>Component:</u>	<u>Wt%</u>
I. Dehyquart L80/Dicocoylethyl Hydroxyethylmonium Methosulfate (and) Propylene Glycol	1.3
Lanette O/Cetearyl Alcohol	2.5
Cutina GMS-V/Glyceryl Stearate	0.5
II. Lamesoft PO 65/Coco-Glucoside (and) Glyceryl Oleate	2.0
III. Water	ad 100.0
IV. Preservative	q.s.

Viscosity Brookfield, mPas: 1800

Preparation in the Laboratory:

Melt the components listed under I at 80-85C and stir until homogeneous. Heat the components listed under III (water) to 80-85C and add to phase I while stirring. Stir for 5 minutes at this temperature. Add the components under II (Lamesoft PO 65, room temperature) to the hot emulsion phase while stirring. Allow the emulsion to cool with stirring in such a way that it remains in continual motion. Avoid the incorporation of air. Add at approx. 40C perfume and preservatives.
Formulation No.: 97/197/9

Hair Rinse with Dehyquart L 80

<u>Component:</u>	<u>Wt%</u>
I. Dehyquart L 80/Dicocoylethyl Hydroxyethylmonium Methosulfate (and) Propylene Glycol	2.5
Lanette O/Cetearyl Alcohol	4.0
Cutina GMS-V/Glyceryl Stearate	0.5
II. Lamesoft PO 65/Coco-Glucoside (and) Glyceryl Oleate	2.5
III. Water	ad 100.0
IV. Preservative	q.s.

Viscosity Brookfield, mPas: 9,500

Preparation in the Laboratory:

Melt the components listed under I at 80-85C and stir until homogeneous. Heat the components listed under III (water) to 80-85C and add to phase I while stirring. Stir for 5 minutes at this temperature. Add the components under II (Lamesoft PO 65, room temperature) to the hot emulsion phase while stirring. Allow the emulsion to cool with stirring in such a way that it remains in continual motion. Avoid the incorporation of air. Add at approx. 40C perfume and preservatives.
Formulation No. 97/197/15

SOURCE: Henkel KGaA: Care Chemicals Division: Suggested Formulas

Hair Silt Conditioner

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	50.75
1	Methylparaben	0.25
1	Hampene Na3T/Tetrasodium EDTA	0.10
2	Lipocol C/Cetyl Alcohol	4.00
2	Lipo GMS-450/Glyceryl Stearate	3.20
2	Emcol 4/Stearalkonium Chloride	5.00
2	Lipovol A/Avocado Oil	5.00
2	FG-10 Antifoam Emulsion/Simethicone	0.10
3	Liposilt Green/Silt	30.00
4	Eucalyptus Oil	0.20
4	Spearmint Oil RM-110	0.20
4	Peppermint Oil RM-116	0.20
5	Lipamide LMEA/Lactamide MEA	1.00

Procedure:

1. In main kettle combine Sequence #1 ingredients under moderate Lightnin' mixing and heat to 78C.
2. In auxiliary kettle combine Sequence #2 ingredients under moderate Lightnin' mixing and heat to 80C.
3. Add Sequence #2 to Sequence #1 under moderate Lightnin' mixing. Switch to slow sweep as batch thickens and cool to 35C.
4. At 35C, add Sequence #3 to batch under slow sweep mixing.
5. Add premixed Sequence #4 ingredients, being sure it is thoroughly dispersed.
6. Add Sequence #5 to batch and cool to 25C.

SOURCE: Lipo Chemicals Inc.: Formula No. 681

Hair Styling Gel

A light gel with a soft set. Does not contain any alcohol. If a stronger hold is desired, increase the concentration of H2OLD. The concentration of AMP-95 will also need to be increased, although not proportionately. To use, just apply a small amount to towel dried hair and rub in vigorously. Blow dry as usual.

<u>Material:</u>	<u>Wt%</u>
1 Deionized Water	86.74
2 H2OLD EP-1	5.00
3 AMP-95	0.20
4 Lubrajel Oil	1.00
5 Thixotrate	2.00
6 Deionized Water	4.50
7 Germall 115	0.50
8 Fragrance	0.03
9 Polysorbate 80	0.03

Procedure:

1. Disperse item #2 into #1.
2. Add item #3 and mix until clear.
3. Add item #4 and mix for a few minutes before adding item #5.
4. Premix item #7 and #6 and add into gel.
5. Premix item #8 and #9 and add into the gel.

Hair Treatment Gel

This formulation is a clear, light straw colored gel with excellent flow characteristics. It has excellent substantivity and may be used as a wash-off or leave-on conditioner.

<u>Material:</u>	<u>Wt%</u>
A Deionized Water	76.80
B Dowicil 200	0.20
C Ucare Polymer JR-400	2.00
D Polyjel	20.00
E Crotein CAA SF	0.33
F Aminogluten MG	0.33
G Crotein HKP SF	0.33

Procedure:

1. Dissolve components B and C into A by heating to 60-65C with high shear mixing. Continue mixing until the polymer is in solution.
 2. Remove heat and using a paddle blade mixer, add components D, E, F and G.
 3. Cool to less than 30C and add fragrance if desired.
- Formulation #93-086-M

SOURCE: Guardian Laboratories: Suggested Formulations

High Quality Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackernium SDC-25 (Stearalkonium Chloride)	10.0
Cetearyl Alcohol	2.0
Brij 72	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add components to water and heat to 70C.
2. With mild agitation, blend until homogeneous.
3. Cool to 50C and add Dye and Fragrance.
4. Cool to room temperature.

Mild Opaque Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackalene 326 (Stearamidopropyl Morpholine Lactate)	8.0
Cetyl Alcohol	1.8
Phosphoric Acid	0.6
Sodium Chloride	0.3
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add first four components to water.
2. Heat to 70C.
3. With continuous stirring, cool to 40C and add Mackstat DM, Dye and Fragrance.

Mild Pearl Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackalene 326 (Stearamidopropyl Morpholine Lactate)	7.0
PEG 400 Distearate	0.5
Sodium Chloride	0.5
Paragon II (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add first three components to water.
2. Heat to 65C.
3. With continuous stirring, cool to 40C and add Paragon II, Dye and Fragrance.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Intensive Conditioner with Microemulsion of Amine Functional Silicones

This rinse-off conditioner contains SME253 which is a 20% Trimethylsilylamodimethicone micro emulsion with particle size less than 20 nm. All components of SME253 comply with regulations related to personal care products in the U.S., European Union, Canada and China. It gives excellent conditioning effects which are soft, smooth, and silky feel.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized water/Diluent	88.85
Hydroxyethylcellulose/Thickener	0.50
Glycerin/Humectant	2.00
Methylparaben/Preservative	0.20
Propylparaben/Preservative	0.10
Part B:	
Cetearyl alcohol (and) Dicetyldimonium Chloride (and) Stearamidopropyl Dimethylamine(1)/Conditioner	3.00
Glyceryl Stearate/Thickener	0.80
Cetyl Alcohol/Thickener	1.50
Part C:	
Methylchloroisothiazolinone (and) Methylisothiazol- inone(2)/Preservative	0.05
Trimethylsilylamodimethicone (and) C11-15 Pareth-7 (and) C12-16 Pareth-9 (and) Glycerin (and) Trideceth-12(SME253)(3)/Conditioner	3.00

Procedure:

1. Heat together all ingredients of Part A at 65C.
2. Heat Part B in a separate container and add to Part A when melted.
3. Cool mixtures to 40C and add Part C in the order listed.

Trade Names/Suppliers:

- (1) Varisoft CRC, Witco Corp.
- (2) Kathon CG, Rohm and Haas
- (3) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CP114

Intensive Rinse-off Conditioner

Rinse-off conditioner providing deep, intensive conditioning for damaged or hard-to-condition hair. SM2115 is a 20% micro-emulsion of an amine functional silicone fluid with a high amine content. It is very substantive and provides conditioning durable through several shampoos.

Ingredient/Function:**Wt%****Part A:**

Cetearyl Alcohol (and) Dicetyldimonium Chloride (and)	
Stearamidopropyl Dimethylamine (1)/Conditioning/Static	5.00
Citric Acid/pH adjustment	0.05
Quaternium-15/Preservative	0.10
Water/Diluent	89.85

Part B:

Trimethylsilylamodimethicone (and) Octoxynol-40 (and)	
Isolaureth-6 (and) Glycerin (SM2115) (2)/Conditioning agent	5.00
Citric Acid/pH adjustment	q.s.

Procedure:

1. Heat water, citric acid and quaternium-15 to 65C. Slowly add remaining Part A ingredients until completely melted and emulsion forms.
2. Cool to 45-50C and add SM2115. Adjust pH to 4.5 with citric acid.
3. Cool and package.

Trade Names/Suppliers:

- (1) Varisoft CRC, Witco Corp.
 - (2) GE Silicones
- Formula CP 109

Cuticle Coat

An excellent leave-in conditioner which can be used throughout the day to provide shine, split end control and overall conditioning. It is applied to the hands and then smoothed through the hair for a soft, silky feel.

Ingredient/Function:**Wt%**

Cyclopentasiloxane (and) Dimethicone (SF1214) (1)/Conditioning/Shine	65.0
Isohexadecane/Carrier/Dry time	33.0
Octyl Methoxycinnamate/UV absorber	2.0

Procedure:

1. Dissolve octyl methoxycinnamate in isohexadecane or isohexadecane/SF1173 blend.
2. Slowly add SF1214 to isohexadecane mixture. Mix until homogeneous.

Trade Names/Suppliers: (1) GE Silicones

Formula CP106

SOURCE: GE Silicones: Personal Care Formulary: Formulations

Leave-on Conditioner with Gluadin WP

<u>Phase:</u>	<u>Component:</u>	<u>Wt%</u>
I.	Sepigel 305 Thickener	3.0
	Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7	
	Water, de-ionized	78.2
II.	Glycerin 86%	5.0
	Ethanol	10.0
	Gluadin WQ/Laurdimonium Hydroxypropyl Hydrolyzed Wheat Protein	0.8
	Gluadin WP/Hydrolyzed Wheat Protein	1.5
	Plantacare 1200 UP/Lauryl Glucoside	0.8
	Cetiol J600/Oleyl Erucate	0.5
	Copherol 1250/Tocopherol	0.2

pH-Value: 7.5

Viscosity (mPas), Brookfield RVF: 6,150

Preparations in the Laboratory:

1. Mix components listed under phase I till homogeneous.
2. Add ingredients of phase II one by one and stir till homogeneous.
3. Finish if necessary with adding the preservative and adjust pH-value.

Formulation No. DE/97/030/16

Sprayable Hair Milk

<u>Component:</u>	<u>Wt%</u>
Dehyquart L 80/Dicocoylethyl Hydroxyethylmonium Methosulfate (and) Propylene Glycol	2.0
Lamesoft PO 65/Coco-Glucoside (and) Glyceryl Oleate	2.0
Water	ad 100
Preservatives	q.s.

pH Value: 3.5

Preparation in the Laboratory:

Mix the ingredients at room temperature.

Formulation No.: 97/203/4

SOURCE: Henkel KGaA: Care Chemicals Division: Suggested Formulas

Leave-on with Gluadin WQ

<u>Component:</u>	<u>Wt%</u>
I. Sepigel 305 Thickener	3
Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7	1
Comperlan KD/Cocamide DEA	5
Glycerine 86%	76
II. Water, de-ionized	0.5
Plantacare 1200 UP/Lauryl Glucoside	0.5
Cetiol J600/Oleyl Erucate	0.2
Copherol 1250/Tocopherol	3
III. Gluadin Almond/Hydrolyzed Sweet Almond Protein	0.8
Gluadin WQ/Laurdimonium Hydroxypropyl Hydrolyzed Wheat Protein	10
IV. Ethanol	q.s.
Perfume	q.s.
Preservative	

pH-value: 7

Viscosity (mPas)/Brookfield RVT, 23C, spindle 4, 10 rpm: 3200

Preparations in the Laboratory:

Mix slowly the Phase I to obtain an homogeneous phase.

Under stirring, add slowly the Phase II.

Add the Phase III.

Formulation DE/96/099/4

Conditioner with Dehyquart L80

<u>Component:</u>	<u>Wt%</u>
I. Dehyquart L80	1.3
Lanette O/Cetearyl Alcohol	3.5
Monomuls 60-35C Powder/Hydrogenated Palm Glycerides	1.0
Eumulgin B2 Flakes/Ceteareth-20	0.8
II. Water, de-ionized/preservative	ad 100
III. Gluadin WQ/Laurdimonium Hydroxypropyl Hydrolyzed Wheat Protein	2.0

pH-value: 3.5

Viscosity (mPas), Brookfield RVF, 23C, spindle 4, 10 rpm: 4800

Preparations in the Laboratory:

Melt phase I at 80-85C. Heat phase II to 80-85C and stir into phase I. Stir for 5 minutes at this temperature. Cool down to 40C while stirring. Add preservative and, if necessary, heat-sensitive additives. Cool down to 30C while stirring.

Formulation DE97/197/1

SOURCE: Henkel KGaA: Care Chemicals Division: Suggested Formulas

Overnight Repair Gel

SM2115 is a 20% microemulsion of an amine functional fluid with a high amine content which provides substantive conditioning. The overnight repair gel is an intensive conditioner, providing a soft, silky feel to the hair plus does not stain fabric. Apply to the hair before sleeping, wash out in the morning with normal shampooing.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Carbomer (1)/Thickener	0.5
Sodium Hydroxide (50%)/Neutralizer	2.0
Deionized Water/Diluent	73.5

Part B:

Quaternium-15/Preservative	0.2
Trimethylsilylamodimethicone (and) Octoxynol-40 (and) Isolaureth-6 (and) Glycerin (SM2115) (2)/ Conditioner	5.0
Deionized Water/Diluent	17.8

Part C:

Glycerin/Humectant	1.0
Fragrance	q.s.
Acetic Acid/pH adjustment	q.s.

Procedure:

1. Mix Part A by slowly adding the carbomer to the water until thoroughly dispersed, then add sodium hydroxide to bring the pH up to 9.
2. Mix together quaternium-15, SM2115 and remaining water.
3. Slowly add Part A to Part B with good stirring.
4. Add glycerin, fragrance and color.
5. Adjust pH to approximately 6 with acetic acid.

Trade Names/Suppliers:

1. Carbopol 980, B.F. Goodrich Co.
2. GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula CP 110

Protein Lotion Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackine 301 (Stearamidopropyl Dimethylamine)	1.5
Cetyl Alcohol	2.5
Lactic Acid (88%)	0.7
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	1.5
Sodium Chloride	0.5
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Dissolve sodium chloride in water.
2. Add first four components and heat to 70C.
3. Blend until homogeneous.
4. Cool to 45C and add remaining components.
5. Cool to room temperature.

Pearl Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet LCB (Liquid Conditioner Concentrate that can be cold blended)	10.0
Triethanolamine	1.0
Sodium Chloride	0.5
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Warm water to 40C.
2. Add Sodium Chloride and Triethanolamine.
3. Add Mackadet LCB and blend slowly.
4. When completely dispersed, add Mackstat DM, Dye, and Fragrance
5. Cool to room temperature.

Hair Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet CBC (Conditioner Concentrate for Viscous Cream Consistency)	5.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackadet CBC to water.
2. Heat to 70C.
3. With continuous mixing, cool to 50C.
4. Add remaining components.
5. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Setting Lotion
for blow-dried hair

<u>Recipe:</u>	<u>Wt%</u>
A Aristoflex A 60/VA/Crotonates Copolymer, Isopropyl Alcohol	1.50
Genamin KSL/PEG-5 Stearyl Ammonium Lactate	1.00
PEG 400/PEG-8	0.20
Iso-Adipate/Diisopropyl Adipate	0.20
Fragrance	0.20
B Isopropyl alcohol	45.00
Water	51.90
Preservative	q.s.

Procedure:

Dissolve the components of A one after another in B.
Formula B V/1020

Antidandruff Setting Lotion

<u>Recipe:</u>	<u>Wt%</u>
A Octopirox/Piroctone Olamine	0.10
Luviskol VA 64I/PVP/VA Copolymer, Isopropyl Alcohol	5.50
Iso-Adipate/Diisopropyl Adipate	0.60
Genamin KSL/PEG-5 Stearyl Ammonium Lactate	0.70
PEG 400/PEG-8	0.50
Fragrance	0.30
B Isopropyl alcohol	35.00
C Water	57.30
D Citric acid-->pH 5.0-6.0	q.s.

Procedure:

1. Dissolve the components of A one after another in B.
 2. Stir C into 1.
 3. Finally adjust the pH with D.
- Formula B V/5002

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Simplified Hair Tonic Preparation

<u>Raw Materials:</u>	<u>Wt%</u>
Mackpro WWP (Wheatgermamidopropyl Dimethylamine Hydrolyzed Wheat Protein)	3.0
Hydroxyethylcellulose	0.4
Mackstat DM (DMDM Hydantoin)	0.3
Menthol Crystals	0.2
Ethyl Alcohol	14.0
PEG-8	4.0
Mackamide AME-75 (Acetamide MEA)	1.0
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Dissolve Hydroxyethylcellulose in water using heat as needed.
2. When dissolved, add Mackpro WWP, PEG-8, Mackamide AME-75, and Mackstat DM.
3. Dissolve Menthol Crystals in Ethyl Alcohol and add to batch
4. Add Dye and Fragrance; cool and fill.

Leave-On Conditioner

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet INC (Conditioner Concentrate)	10.0-12.5
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water and Fragrance	qs to 100.0

Procedure:

1. Vary the amount of Mackadet INC depending on the set desired. 10% use level is suggested for regular set and 12.5% for firm set.
2. Completely disperse the fragrance in the Mackadet INC.
3. Add Mackstat DM to protect the diluted solution. (Note: The concentrate contains only enough preservative to protect the concentrate. Please add additional preservative to protect diluted solution.)
4. Add D.I. Water.
5. Apply finished product to shampooed and towel dried hair; do not rinse; style hair.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

55% VOC Aerosol Hair Spray

This formula utilizes Eastman AQ 48 Ultra polymer to give fast-drying, moderate hold with good curl retention in a 55% VOC system.

<u>Formula:</u>	<u>Wt%</u>
Part A:	
Eastman AQ 48 Ultra Polymer	5.0
Deionized Water	36.1
Part B:	
Eastman Ethanol (SDA-40)	20.0
AMP-95	0.6
Balance-47 (28-4947)	3.0
Silwet L-7657 (Dimethicone Copolyol)	0.3
Dymel A (Dimethyl Ether)	35.0

Procedure:**Part A:**

Start agitation of deionized water and add Eastman AQ 48 Ultra polymer pellets.

Heat pellet/water mixture to 40C with continuous rapid agitation.

Mix until polymer is completely dispersed.

Part B:

Dissolve AMP-95 in ethanol.

While maintaining good agitation, slowly sift in Balance-47.

Mix until polymer is dissolved.

Add Part B to Part A:

Add dimethicone copolyol.

Mix until homogeneous.

Filter, and fill cans.

Charge with dimethyl ether propellant.

Suggested Valve System:

Item:	Description:
Sequist Valve	XT-91
Stem Orifice	0.013"
Gasket	Butyl 0.035" THK. Code: 502
Spring	0.023" SS
Body Orifice	0.016" XT-Standard
Cup	XT Aluminum Ann. Ring, Epoxy Top, Micoflex Bottom, Buna-N Cup Gasket
Vapor Tap	0.013"
Dip Tube	0.122" Inside Diameter
Actuator	XT-150 Misty, 0.020" Misty (0702-05480-20)

SOURCE: Eastman Chemical Co.: Formulation No. X23368-79-1

55% VOC Aerosol Hair Spray with AQUAREZ HS Polymer

<u>Formula:</u>	<u>Wt%</u>
Aquarez HS Polymer Emulsion (41% Solids) (a)	17.07
Deionized Water	26.79
Eastman Ethanol (SDA-40), Anhydrous	20.00
AMP-95 (b)	1.14
Fragrance and Other Additives	q.s.
Dymel A (Dimethyl Ether) (c)	35.00

Procedure:

Combine Aquarez HS polymer emulsion and deionized water.

While maintaining good agitation, add ethanol.

Add AMP-95 sufficient for 75% neutralization of Aquarez HS.

Add remaining ingredients.

Mix until homogeneous.

Fill cans and charge with dimethyl ether propellant.

Valve Recommendations (d):

Item:	Description:
SeaquistPerfect Valve	XT-91
Stem Orifice	0.013"
Gasket	Butyl 0.035" THK, Code: 502
Spring	0.023" Stainless Steel
Body Orifice	0.016" XT-Standard
Cup	XT Aluminum Ann. Ring, Epoxy Top, Mico-flex Bottom, Buna-N Cup Gasket
Vapor Tap	0.013"
Dip Tube	0.122" Inside Diameter
Actuator	ST-200 Misty, 0.018" Misty (1102-05480-18)

(a) Eastman Chemical Company

(b) Angus Chemical Company

(c) DuPont

(d) SeaquistPerfect

SOURCE: Eastman Chemical Co.: Formulation X26330-093

55% VOC High Performance Aerosol Hair Spray

This low VOC formulation is designed to provide excellent spray aesthetics, hold, fast drying time, and less initial curl droop compared to standard 55% VOC systems.

Ingredients:

	<u>Wt%</u>
(1) Amphomer LV-71	2.28
(2) Resyn 28-2930	0.97
(3) AMP Regular	0.55
(4) Citroflex 2	0.25
Deionized Water	18.44
Ethanol, SDA-23A (190 proof)	52.51
Propellant, A-17	10.00
Hydrofluorocarbon, 152a	15.00

Valve Specifications:	Seaquist VX-81
Stem: 0.011"	Gasket: Buna-P 0.0145"
Body: 008 Standard	Cup: HI Profile, Epoxy Top
Vapor Tap: None	Spring: SS
Tubing ID: 0.122"	Actuator: 0.023" Misty

Preparation:

Dissolve AMP in ethanol and water. While maintaining good agitation, slowly sift in Amphomer LV-71 and Resyn 28-2930. Once in solution, add remaining ingredients and mix until homogeneous. Filter and fill. Charge with propellants.

Formulation 9612:101

High Performance, Low Cost 55% VOC Aerosol Hair Spray

This low VOC formulation is designed to provide excellent sprayability, hold, fast drying time, and less initial curl droop compared to standard 55% VOC systems.

Ingredients:

	<u>Wt%</u>
(1) Resyn 28-2930	5.00
(2) AMP Regular	0.47
(3) Fragrance, Q-14662	0.30
Deionized Water	14.23
Acetone	15.00
Anhydrous Ethanol	40.00
(4) N-Butane	15.00
(5) Dymel 152A	10.00

Preparation:

Dissolve AMP in ethanol, acetone and water. While maintaining proper agitation, slowly sift in the Resyn 28-2930. When solution is complete, add remaining ingredients. Filter and fill aerosol containers. Charge cans with propellant.

Valving and Actuators:	Seaquist NS-31
Stem: 0.013"	Vapor Tap: None
Gasket: Butyl .042" thick code: 501	Dip Tube: 0.165"
Spring: 0.020" SS	A-D Dim: 8"
Body: 0.010" STD	Actuator: Excel 200 Misty .023"

Formulation 8897:22-A

SOURCE: National Starch & Chemical Co.: Suggested Formulations

55% VOC Pump Hair Spray

<u>Formula:</u>	<u>Wt%</u>
Eastman AQ48 Ultra Polymer	5.0
Deionized Water	36.1
Eastman Ethanol (SDA-40)	55.0
AMP-95 (a)	0.6
Balance 47 (28-4947) (b)	3.0
Dimethicone Copolyol	0.3

Procedure:

Start agitation of deionized water and add Eastman AQ48 Ultra polymer pellets.

Heat pellet/water mixture to 40C (104F) with continuous rapid agitation.

Mix until polymer is completely dispersed.

Cool to room temperature and add ethanol.

Add AMP-95 sufficient for 80% neutralization of Balance 47.

Add Balance 47 slowly with agitation.

Add dimethicone copolyol.

Mix until uniform.

Suggested Valve System(c):

<u>Item:</u>	<u>Description:</u>
Pump	37MS Air Force II, 20/410 (150 ul Delivery Volume)
Actuator	Smooth Top A-6
Dip Tube	0.055" Inside Diameter
Gasket	GP Plastic/Rubber
Housing	A
Insert	1620-1010 Natural Celcon
Spring	SS (2513)
Stem	Ribbed

(a) Angus Chemical Company

(b) National Starch and Chemical

(c) Emson

SOURCE: Eastman Chemical Co.: Formulation X20190-104

55% VOC Pump Hairspray

This low VOC formulation provides good sprayability, medium hold and good humidity resistance.

<u>Ingredients:</u>	<u>Wt%</u>
(1) Balance 0/55 (50% solids)	7.20
(2) Lovocryl 47	2.40
(3) AMP (reg)	1.01
(4) Silsoft A-843	0.10
Deionized Water	34.29
*Anhydrous Ethanol	55.00

*Substitution of Anhydrous Ethanol with 64.17% SDA-23A (190 proof and containing 7.3% acetone denaturant) would result in improved tack and dry times while maintaining 55% VOC compliance.

Preparation:

Dissolve AMP in ethanol and water. While maintaining proper agitation, slowly sift in Balance 0/55 and Lovocryl-47. Mix until homogeneous. Filter and fill containers.

Valving and Actuators: Seaquist Perfect-Euromist II
 Body: 160 mcl Output Closure: 24-410, White
 Liner: PE/Butyl Blend Insert: .010" X .020" Deep
 Formulation 9612:79B

55% VOC Pump Hairspray

This low VOC formulation provides excellent sprayability, low tack, fast drying, flexible hold and good humidity resistance

<u>Ingredients:</u>	<u>Wt%</u>
(1) Balance CR (45% solids)	8.88
KOH	0.34
Deionized Water	35.78
*Anhydrous Ethanol	55.00

*Substitution of Anhydrous Ethanol with 64.17% SDA-23A (190 proof and containing 7.3% acetone denaturant) would result in improved tack and dry times while maintaining 55% VOC compliance.

Preparation:

Dissolve KOH in ethanol and water. While maintaining proper agitation, slowly sift in Balance CR. Mix until homogeneous. Filter and fill containers.

Valving and Actuators: Seaquist Perfect: Euromist II
 Body: 160 mcl Output Closure: 24-410, White
 Insert: .010" X .010" Deep Liner: PE/Butyl Blend
 Formulation 9612:79C

SOURCE: National Starch & Chemical Co.: Suggested Formulations

55% VOC Pump Hairspray

This low VOC formulation provides good sprayability, low tack, fast drying, max hold and excellent humidity resistance.

<u>Ingredients:</u>	<u>Wt%</u>
(1) Balance CR (45% solids)	8.88
(2) Balance Extra (45% solids)	3.60
KOH (100% active)	0.50
(3) Citroflex-2	0.10
(4) Silsoft A-843	0.10
Deionized Water	31.82
*Anhydrous Ethanol	55.00

*Substitution of Anhydrous Ethanol with 64.17% SDA-23A (190 proof and containing 7.3% acetone denaturant) would result in improved tack and dry times while maintaining 55% VOC compliance.

Preparation:

Dissolve the KOH in ethanol and water. While maintaining proper agitation, slowly sift in Balance CR and Balance Extra. Mix until homogeneous. Filter and fill containers.

Valving and Actuators: Seaquist Perfect: Euromist II
 Body: 160 mcl Output Liner: PE/Butyl Blend
 Closure: 24-410, White Insert: .010" X .010" Deep
 Formulation 9612:80A

55% VOC Pump Hairspray

This low VOC formulation provides excellent sprayability, firm hold and good humidity resistance.

<u>Ingredients:</u>	<u>Wt%</u>
(1) Balance 0/55 (50% solids)	12.00
(2) AMP (reg)	0.85
Deionized Water	32.15
*Anhydrous Ethanol	55.00

*Substitution of Anhydrous Ethanol with 64.17% SDA-23A (190 proof and containing 7.3% acetone denaturant) would result in improved tack and dry times while maintaining 55% VOC compliance.

Preparation:

Dissolve AMP in ethanol and water. While maintaining proper agitation, slowly sift in Balance 0/55. Mix until homogeneous. Filter and fill containers.

Valving and Actuators: Seaquist Perfect: Euromist II
 Body: 160 mcl Output Liner: PE/Butyl Blend
 Closure: 24-410, White Insert: .010" X .010" Deep
 Formulation 9612:80B

SOURCE: National Starch and Chemical Co.: Suggested Formulations

55% VOC Pump Hair Spray with AQUAREZ HS Polymer

<u>Formula:</u>	<u>Wt%</u>
Aquarez HS Polymer Emulsion (41% Solids)	17.07
Deionized Water	27.01
Eastman Ethanol (SDA-40), Anhydrous	55.00
AMP-95	0.92
Fragrance and Other Additives	q.s.

Procedure:

Combine Aquarez HS polymer emulsion and deionized water.
 While maintaining good agitation, add ethanol.
 Add AMP-95 sufficient for 60% neutralization of Aquarez HS.
 Add remaining ingredients.
 Mix until homogeneous.

Suggested Valve System (c):

<u>Item:</u>	<u>Description:</u>
Pump	Euromist, 160 mcl Output
Body	160 mcl Output
Insert	0.016" X 0.010" Deep (Natural)
Spring	302 SS, 1 lb 0 oz
Piston	Natural
Liner	PE/Butyl Blend
Dip Tube	0.060" Inside Diameter
Seal Valve	Standard
Poppet	Standard
Turret	24 mm

(c) Seaquist Perfect

Formulation X26330-094

Styling Mousse (Alcohol-Free)

This alcohol-free mousse offers styling with a natural look and moderate hold.

<u>Formula:</u>	<u>Wt%</u>
Distilled Water	q.s. to 100
Eastman AQ48 Ultra Polymer	8.0
Myvatex Texture Lite Emulsifier	5.5
Monamid 150 ADD	1.0
Polysorbate 60	0.15
Myvacet 9-45 Distilled Acetylated Monoglyceride	0.15
Preservative	q.s.
Fragrance	q.s.
Citric Acid	q.s.

Procedure:

Heat deionized water to above 40C.
 Disperse Eastman AQ48 Ultra polymer with rapid agitation.
 Cool to room temperature and add preservative.
 Slowly add Myvatex Texture Lite emulsifier with high-speed agitation. Care should be taken when mixing to avoid aeration.
 Prewarm and mix polysorbate 60, Myvacet 9-45 distilled acetylated monoglyceride, and Monamid 150, when uniform, add to batch. Add fragrance.
 Adjust pH to 6.5-7.0 with citric acid.
 Aerosol final concentrate at 5.23 g/mL of A-46 propellant.(1)

(1) Aeropres

Formulation X25231-156

SOURCE: Eastman Chemical Co.: Suggested Formulations

55% VOC Reduced Cost, Hard Holding Hair Spray

This formulation has excellent stiffness, good sprayability, and a reduced cost. The use of acetone results in reduced particle size and improved spray.

<u>Ingredients:</u>	<u>Wt%</u>
(1) Balance CR (45% active)	5.45
(2) Resyn 28-2930	3.00
Potassium Hydroxide (87% active)	0.47
(3) Citroflex-2	0.25
(4) Sodium Benzoate	0.25
Acetone	7.00
Anhydrous Ethanol	22.00
Deionized Water	28.58
(5) DME propellant	33.00

Preparation:

Dissolve potassium hydroxide in ethanol and water. While maintaining proper agitation, slowly sift in Balance-CR and Resyn 28-2930. When the solution is complete, add the remaining ingredients. Mix until homogeneous. Filter and fill containers. Charge cans with propellant.

Valving and Actuators:

Valve Type: Seaquist ST-71/Cup: Hi Prof, Epoxy Top, Laminate
 Stem: 0.013" Vapor Tap: 0.013" Bottom
 Gasket: Butyl .042" thick code: 502 Dip Tube: 0.122"
 Spring: 0.023" SS A-D Dim: 8"
 Body: 0.016" STD Actuator: ST-150 Misty 0.020"
 Formulation 9747:71

Fast Drying 55% VOC Aerosol Hair Spray

This formulation is designed to provide fast drying times, high stiffness, good subjective properties, no initial curl droop, and lower corrosion potential.

<u>Ingredients:</u>	<u>Wt%</u>
(1) Amphomer 4910	4.00
(2) AMP regular	0.66
(3) Citroflex-2	0.10
Anhydrous Ethanol	55.00
(4) Dymel 152a	40.24

Preparation:

Dissolve AMP in ethanol and water. While maintaining proper agitation, slowly sift in Balance-CR and Resyn 28-2930. When the solution is complete, add the remaining ingredients. Mix until homogeneous. Filter and fill containers. Charge cans with propellant.

Valving and Actuators:

Valve Type: Seaquist NS-31
 Stem: 0.013" Vapor Tap: None
 Body: 0.010" STD Actuator: Excel 200 Misty 0.023"
 Dip Tube: 0.165"
 Formulation: 8409:85D

SOURCE: National Starch and Chemical Co.: Suggested Formulations

55% VOC Sculpting Aerosol Hair Spray

This formulation is designed to provide fast drying times, flexible stiffness, good hold and subjective properties, no initial curl droop, and lower corrosion potential.

<u>Ingredients:</u>		<u>Wt%</u>
(1)	Balance 47	4.50
(2)	AMP Regular	0.98
(3)	Crotein ADW	0.20
(4)	Sodium Benzoate	0.25
	Fragrance	0.25
	Deionized Water	12.82
(5)	SDA-23A	56.00
(6)	N-Butane	7.00
(7)	Dymel 152A	18.00

Preparation:

Dissolve AMP in ethanol. While maintaining good agitation, slowly sift in the Balance-47. When the solution is complete, add remaining ingredients. Filter and fill aerosol containers. Charge cans with propellant.

Valving and Actuators: Seaquist NS-31

Stem: 0.013"

Vapor Tap: None

Gasket: Butyl .042" thick code: 502 Dip Tube: 0.122"

Body: 0.010" Std

Actuator: 0.023" Excell 200 Misty

Formulation 9612:99

55% VOC Pump Hairspray

This low VOC formulation provides good sprayability, firm hold and excellent humidity resistance.

<u>Ingredients:</u>		<u>Wt%</u>
(1)	Balance 0/55 (50% solids)	8.40
(2)	Amphomer 4910	1.80
(3)	AMP (reg)	0.89
(4)	Silsoft A-843	0.20
	Deionized Water	33.71
	*Anhydrous Ethanol	55.00

*Substitution of Anhydrous Ethanol with 64.17% SDA-23A (190 proof and containing 7.3% acetone denaturant) would result in improved tack and dry times while maintaining 55% VOC compliance.

Preparation:

Dissolve AMP in ethanol and water. While maintaining proper agitation, slowly sift in Balance 0/55 and Amphomer. Mix until homogeneous. Filter and fill containers.

Valving and Actuators: Seaquist Perfect: Euromist II

Output: 160 mcl Output

Liner: PE/Butyl Blend

Closure: 24-410, White

Insert: .010" X .020" Deep

Formulation 9612:79A

SOURCE: National Starch and Chemical Co.: Suggested Formulations

Section VII

Lotions

After Sport Massage Lotion

A low viscosity "emulsifier-free" lotion containing Bentone Gel EUG rheological additive.

<u>Ingredients:</u>	<u>Wt%</u>
Caprylic/Capric Triglyceride	5.00
Octyldodecanol	4.00
Isopropyl Myristate (and) Soya Bean Oil (and) Arnica Extract	2.00
Propylene Glycol	3.00
Acrylic Acid/Vinyl Ester Copolymer	0.30
Triethanolamine 99%	0.15
Perfume	0.20
Methyldibromoglutaronitrile (and) Dipropylene Glycol	0.20
Bentone Gel EUG	3.00
Demineralized Water	Bal to 100%
	(pH approx 5.5)

Method Of Manufacture:

1. Thoroughly disperse the Bentone Gel EUG additive in the oil phase, then disperse the Acrylic Acid/Vinyl Ester Copolymer, then heat to 45C.
2. Add the Triethanolamine to the aqueous phase and heat to 45C.
3. Add the two phases, with mixing, and continue to stir.
4. Add the perfume and preservative below 30C.

This "emulsifier free" lotion is easy to apply to the skin and the emulsion breaks rapidly on contact with the skin. The presence of Bentone Gel EUG additive provides body to the lotion and eliminates the "wetness" often associated with Carbomer-stabilized emulsions.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

AHA High Viscosity Lotion with Uninontan U-34

An AHA Glycolic lotion with Uninontan U-34 and Gorgonian Extract to provide an even skin tone and help minimize skin irritation. This formula also contains a balanced emulsifier system for excellent stability and a variety of emollient moisturizers for skin softness.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	78.65
1	Uniphen P-23	0.50
1	Liponic EG-1/Glycereth-26	1.50
2	Keltrol/Xanthan Gum	0.25
2	Veegum/Magnesium Aluminum Silicate	0.15
3	Ultrapure L/Petrolatum	1.50
3	Lipo GMS 450/Glyceryl Stearate	1.50
3	Lipopeg 6000 DS/PEG-150 Distearate	1.75
3	Lipowax G/Stearyl Alcohol (and) Ceteareth-20	0.25
3	Lipowax P/Emulsifying Wax, NF	0.45
3	Lipocol C/Cetyl Alcohol	1.00
3	Liponate NPGC-2/Neopentyl Glycol Dicaprylate/Dicaprate	4.00
3	Lipovol SAF/Safflower Oil	0.50
3	Lipovol SES/Sesame Oil	0.50
4	Glycolic Acid, 99%	2.00
4	Uninontan U-34	5.00
5	Gorgonian Extract/Butylene Glycol (and) Sea Whip Extract	0.50
6	Triethanolamine, 99%	Q.S.*
* To adjust pH		

Procedure:

1. Mix sequence #1 together with overhead mixer while heating to 78C.
2. Dry mix sequence #2 together and add slowly to sequence #1 with medium/high agitation. (Mix well until both gums are completely hydrated/homogeneous).
3. Mix sequence #3 together and heat to 78C until completely melted and add to batch. (Cool to 55C, place on sweep blade and continue to cool to 45C).
4. At 45C, premix sequence #4 together at room temperature and add to batch using sweep blade at low speed. Lower temperature to 40C.
5. At 40C, add sequence #5 to the batch.
6. Cool down to 25C and remove from mixer.
7. Adjust pH to 3.8-4.2 with sequence #6.

Specifications:

pH: 4.0+-0.2

Viscosity: 32,730cps+-10%

SOURCE: Lipo Chemicals Inc.: Formula No. 923

AHA Lotion

<u>Ingredients:</u>	<u>Wt%</u>
Mineral oil (25 cS at 25C)	6.0
GMS A/S (Glyceryl stearate and PEG-100)	6.0
GMS N/E (Glyceryl stearate)	2.5
Crodacol C90 (Cetyl alcohol)	1.5
Silicone 200/100 (Dimethicone)	0.5
Water deionised	0.3
Kelzan S (Xanthan gum)	0.3
Propylene glycol	5.0
Purasal S/PF 60 (Sodium lactate)	5-12
Purac PH 90 (Lactic acid) to required pH	2- 5
Perfume, preservative, colour	qs

Croda formulation

Water in Oil Moisturizing Lotion

<u>Ingredients:</u>	<u>Wt%</u>
Phase A:	
Veegum (MgAlSilicate)	1.30
Water	to 100%
Magnesium sulphate	0.50
Phase B:	
Mineral oil, Light	9.00
Polysynlane	10.00
Nimlesterol D	7.50
Amerchol L101	9.00
Purasal S/HQ 60	5-12
Purac PH 90 to required pH	0.05-0.15
Witcamide 511	2.00
Preservative	q.s.

It is not 100% sure whether the Purac products have to be added to Phase A or Phase B.

Polyester Corp. formulation

SOURCE: Purac America, Inc.: Suggested Formulations

Body Forming Lotion(Pentacare-HP/Revitalin-BT)

In this emulsifier-free lotion Pentacare-HP reduces the fine lines and wrinkles directly after application. Revitalin-BT activates the cell metabolism. The combination of all actives makes this light and agreeable formulation to an ideal product for body forming application.

Ingredients/INCI Name:

	<u>Wt%</u>
A) Pemulen TR-1/Acrylates/C10-30 Alkyl Acrylate Cross-polymer	0.30
Cetiol 868/Octyl Stearate	8.00
Almond Oil/Sweet Almond Oil	10.00
Vitamin E Acetate/Tocopheryl Acetate	0.50
B) Deionized Water	68.80
Carbopol Ultrez 10/Carbomer	0.10
Glycerin/Glycerin	2.00
Phenonip	0.50
Caffeine/Caffeine	0.50
C) Sodium Hydroxide 18% Solution q.s. pH 6.0	
D) Ivy Extract/Ivy Extract	2.00
Pentacare-HP/Water, Locust Bean (Ceratonia Siliqua)	
Gum, Hydrolyzed Casein	5.00
Revitalin-BT/Glycoproteins	2.00
Fragrance/Number one 908 CK	0.30

Procedure:

Mix phase A) and homogenize for 2 minutes. Under stirring add phase B) to phase A) and homogenize. Neutralize with phase C). Finally incorporate items of phase D) one after the other.

SOURCE: Pentapharm Ltd.: Application No. C 031.0/05.99

Body Lotion with AHAIngredients:Wt%

Phase A:

Water, deionised	53.60
Stabileze 06/QM	2.00
Suttocide A	0.50

Phase B:

Water, deionised	10.00
Sodium lactate (Purasal S/PF 60)	8.40
Lactic Acid (Purac PH 90) (adjust to pH 4)	3.00

Phase C:

Glyceryl Stearate (Cerasynt 945)	4.00
PEG-20 Stearate (Cerasynt 840)	2.00
Beeswax	3.00
Maleated Soybean Oil (Ceraphyl GA-D)	2.00
Diisopropyl Adipate (Ceraphyl 230)	2.00
Myristyl Myristate (Ceraphyl 424)	2.50
Isocetyl Alcohol (Ceraphyl ICA)	3.00
Mineral oil	3.00
Germaben II-E	1.00

Procedure:

1. Disperse Stabileze 06/QM in water and heat to 80 degrees Celsius with constant stirring until a translucent gel is formed.
2. Cool to 60 degrees Celsius. Add Suttocide A and mix until a clear gel is obtained.
3. Add premix (Phase B) with pH adjusted to 4, into Phase A.
4. Heat Phase C with uniform stirring and cool to 60 degrees Celsius. Add to Phase AB.
5. Mix and homogenize to 45 degrees Celsius.
6. Add Germaben II-E at 40 degrees Celsius.

SOURCE: Purac America, Inc.: ISP Formulation

Body Lotion with Sunscreens

SFE839 Elastomer Dispersion is silicone elastomer dispersed in cyclopentasiloxane. It acts as an emollient and provides smooth, silky and luxurious afterfeel.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Octyl Methoxycinnamate/UV absorber	7.5
Benzophenone-3/UV absorber	3.0
Stearic Acid/Emulsifier	2.5
Glyceryl Stearate SE/Emulsifier	1.0
PVP/Eicosene Copolymer (1)/Film former	2.0
Cetyl Alcohol/Thickener	0.3
Caprylic/Capric Triglyceride/Emollient	3.0
Acrylates/C10-30 Alkyl Acrylate Crosspolymer (2)/Emulsifier/Thickener	0.25
Part B:	
Glycerin/Humectant	3.0
Disodium EDTA/Chelating agent	0.05
Methylparaben/Preservative	0.2
Propylparaben/Preservative	0.1
Xanthan Gum/Thickener	0.4
Water	70.5
Part C:	
Triethanolamine/Neutralizer/Emulsifier	0.9
Part D:	
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer (SFE839)(3)/Emollient	5.0
Sorbitan Oleate/Emulsifier	0.3

Procedure:

1. Combine Part A and heat with agitation to 75C.
2. Mix together all Part B and heat to 70C.
3. Add Part A to Part B under high shear mixing.
4. Cool with agitation to 45C and add Part C.
5. Combine Part D and add to the batch with moderate agitation until uniform.

Trade Names/Suppliers:

- (1) Ganex V-220, ISP
- (2) Pemulen TR-1, BF Goodrich
- (3) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula SC105

Body Lotion with Sunscreens

This water-in-oil formulation using SF1528 is a light, non-greasy, less tacky sunscreen. SF1642 acts as an emollient/thickener and provides smooth, silky and luxurious afterfeel. This sunscreen demonstrates the use of silicones in conjunction with organics.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Octyl Methoxycinnamate/UV-absorber	7.5
Octyl Salicylate/UV-absorber	3
Benzophenone-3/UV-absorber	3
Part B:	
Bis-Phenylpropyl Dimethicone(SF1555)(1)/Emollient	5
C30-45 Alkyl Dimethicone(SF1642)(1)/Thickener, Emollient	1
Dimethicone/Vinyl Dimethicone Crosspolymer(SFE839)(1)/Thickener, Emollient	5
Cyclopentasiloxane (and) Dimethicone Copolyol(SF1528)(1)/Primary Emulsifier	10
PEG-30 Dipolyhydroxystearate/Secondary Emulsifier	1
Sorbitan Oleate/Secondary Emulsifier	0.5
Part C:	
Water/Vehicle	q.s.
Butylene Glycol/Humectant	2
NaCl/Stabilizer	1.0
Quaternium-15/Preservative	0.1

Procedure:

1. Combine Part A and mix until uniform.
2. Add ingredients of Part B to Part A and heat to 60-65C.
3. In a separate vessel, mix all ingredients of Part C. Heat to 60-65C.
4. Slowly add water phase to oil phase under moderate mixing.
5. Homogenize for 1-2 minutes.

Suppliers:

- (1) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula SC108

Daily Protective Lotion (With Sunscreen)
Oil Free, Fragrance Free

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
A-A1 Amphisol/Cetyl Phosphate (and) DEA Cetyl Phosphate	1.00
Arlacel 165/Glyceryl Stearate (and) PEG 100 Stearate	1.00
Cetyl Alcohol	1.50
Schercemol DISD/Diisostearyl Dimerate	1.00
Schercemol CO/Cetyl Octanoate	8.00
Silicone fl. 350 cps	0.10
A2 Parsol MCX/2-Ethyl Hexyl P-Methoxycinnamate	3.00
Dipsal/Dipropylene Glycol Salicylate	2.30
B-B1 Deionized Water	67.40
Carbopol 941 2% Aq. Soln.	10.00
B2 Glycerin	3.00
B3 Triethanolamine	0.20
C- Germaben II	1.00
D- Rose Extract	0.50

Procedure:**Phase B:**

In the main beaker, disperse B1 together at 75-85C.

Add Glycerin.

Add Triethanolamine to neutralize the Carbopol gel.

Mix until a smooth gel is obtained.

Phase A:

Blend Phase A1 to at least 85C. Once completely clear add A2.

Blend Phase A together until a homogeneous oil phase is obtained.

Add Phase A to Phase B with continuous mixing at 80-85C for 15 minutes.

Cool batch to 60C, then add C. Continue to cool batch to 30C, then add D.

Formulation L-213-3

Cationic Emollient Lotion

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
<u>Part A:</u>	
Deionized Water	q.s.
Schercoquat IALA/Isostearamidopropyl Laurylacetodimonium Chloride	5.0
Schercomid LME-75/Lactamide MEA	3.0
Germaben II	1.0
<u>Part B:</u>	
Schercemol 185/Isostearyl Neopentanoate	15.0
Schercemol MM/Myristyl Myristate	1.0
Cetyl Alcohol	4.0
Schercemol GMIS/Glyceryl Isostearate	4.5

Procedure:

1. Part A. Disperse Schercoquat IALA in water. When solution is uniform, add the rest of the ingredients and heat to 70C.

2. Prepare Part B and heat to 70C.

3. Add Part A to Part B, stirring continuously.

4. Cool to room temperature. Continue with moderate agitation.

Formulation SK 135

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

European Body Lotion

A water-in-oil formulation producing a lotion with a light, non-greasy feel. SF1328 acts as a water-in-oil emulsifier. SF1202, cyclopentasiloxane, is an emollient providing spreadability, detackification and a dry, non-greasy feel.

(1)

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Sorbitan Stearate/Emollient/Co-emulsifier	0.91
Lanolin/Emollient	0.96
Part B:	
Glycerin/Humectant	1.05
Sodium Chloride/Stabilizing aid	1.80
Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben(3)/Preservative	0.60
Water	54.69
Part C:	
Cyclomethicone (and) Dimethicone Copolyol	
(SF1328)(4)/Emulsifier	25.24
Cyclopentasiloxane(SF1202)(4)/Emollient/Detackifier	14.75

(2)

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Sucrose Distearate(1)/Emollient/Co-emulsifier	0.40
Sorbitan Stearate/Emollient/Co-emulsifier	0.50
Lanolin/Emollient	0.80
Perfluoromethylisopropyl Ether(2)/Film-former	0.50
Part B:	
Magnesium Aluminum Silicate/Viscosity adjuster	0.30
Glycerin/Humectant	2.50
Sodium Chloride/Stabilizing aid	1.80
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl-	
paraben (and) Propylparaben(3)/Preservative	0.60
Water	64.60
Part C:	
Cyclomethicone (and) Dimethicone Copolyol	
(SF1328)(4)/Emulsifier	14.00
Cyclopentasiloxane(SF1202)(4)/Emollient/Detackifier	14.00

Procedure:

1. Add Part B to Part C with high-speed mixing.
2. Melt Part A and quickly add to Part BC emulsion with continued high-speed mixing.
3. Homogenize to a stable emulsion.

Comments:

- * Improve freeze-thaw stability by using 1% sorbitan isostearate
- * Increase viscosity with lower SF1202 level and/or increased magnesium aluminum silicate.

Trade Names/Suppliers:

- | | |
|-----------------|------------------|
| (1) Croda, Inc. | (2) Ausimont |
| (3) Germaben II | (4) GE Silicones |

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 109

Facial Cleansing Lotion

Dual purpose make-up remover and skin conditioner for every day use. The lotion provides mild cleansing, emollience and skin protection. The inclusion of Akoline MCM offers anti-microbial properties to the formulation and helps solubilising impurities on the skin. Lipex Canola-U adds natural tocopherols and phyto-sterols to protect and reduce skin irritancy from environmental stress and other aggressions against the skin. Akorex L and Lipex together with Lipex Canola-U imparts a nice soft skin feel.

<u>Raw Material/INCI Name:</u>		<u>Wt%</u>
1. Water, dem./Aqua	ad	100.00
Glycerin 99.5%		5.00
2. Pationic SCL/Sodium Cocoyl Lactylate		0.50
Rita Cetearyl Alcohol		2.50
Rita GMS/Glyceryl Stearate		4.00
Akoline MCM/Caprylic/capric glycerides		2.00
Akomed R/Caprylic/capric triglycerides		2.50
Lipex Canola-U/Canola oil unsaponifiables		2.00
Akorex L/Hydrogenated Canola oil		0.50
Lipex 203/Mango (Magnifera Indica) seed oil		0.50
Arlamol HD/Isohexadecane		8.00
3. Euxyl K 400/Methyldibrome Glutaronitrile (and)		
Phenoxyethanol		0.20
Trimaran 61636/Parfum		0.07
4. Sicovit Patentblau 85 E131/C.I.42051/Acid Blue 3		q.s.

Manufacturing Procedure:

Take the ingredients for Position 1. Heat to 80-85C. Melt the ingredients for Position 2 at a temperature of 80-85C. Once the product has reached the prescribed temperature, slowly work Position 1 into Position 2, stirring and homogenising all the time. Stir while cooling down. Once a temperature of 30C has been reached, add the ingredients for Position 3. Finally add Position 4 as a solution in a small amount of water from Position 1. Cool down to 28C, stirring all the time.

Appearance: Smooth, shiny, blue colored lotion.

SOURCE: Jarchem Industries, Inc.: Suggested Formulation

Facial Lotion for Acne and Shine Control

A Hydroxypropyl Beta Cyclodextrin (and) Salicylic Acid lotion containing Uninontan U-34 and Gorgonian Extract to provide even skin tone and help minimize skin irritation. This formula reduces shine by absorbing and normalizing facial oil while providing moisturization to the skin.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	57.70
1	Uniphen P-23	0.50
1	Liponic EG-1/Glycereth-26	3.00
2	Keltrol/Xanthan Gum	0.20
2	Veegum/Magnesium Aluminum Silicate	0.15
3	Ultrapure L/Petrolatum	1.50
3	Lipo GMS 450/Glyceryl Stearate	1.50
3	Lipopeg 6000 DS/PEG-150 Distearate	1.75
3	Lipowax G/Stearyl Alcohol (and) Ceteareth-20	0.25
3	Lipowax P/Emulsifying Wax, NF	0.45
3	Lipocol C/Cetyl Alcohol	1.00
3	Liponate NPGC-2	4.00
3	Lipovol SAF/Safflower Oil	0.50
3	Lipovol SES/Sesame Oil	0.50
4	Orgasol 2002 D Nat Cos/Nylon-12	1.50
5	Lipo CD-SA	20.00
5	Uninontan U-34	5.00
6	Gorgonian Extract	0.50
7	Triethanolamine, 99%	*QS
*To adjust pH		

Procedure:

1. Mix sequence #1 together with overhead mixer while heating to 78C.
2. Dry mix sequence #2 together and add slowly to sequence #1 with medium/high agitation. (Mix well until both gums are completely hydrated/homogeneous.)
3. Mix sequence #3 together and heat to 78C until completely melted and add to batch. (Cool to 55C, place on sweep blade and continue to cool to 45C.)
4. At 45C, add sequence #4 to batch using sweep blade at low speed. Lower temperature to 40C.
5. At 40C, add sequence #5 to the batch. Cool to 35C.
6. At 35C, add sequence #6 to batch.
7. Cool down to 25C and remove from mixer.
8. Adjust pH to 3.8-4.2 with sequence #7.

Specifications:

pH: 4.0+-0.2

Viscosity: LVT #4 @ 30 rpm: 7,400 cps +_10%

SOURCE: Lipo Chemicals Inc.: Formula No. 951

Four Season's Lotion**Raw Materials:**

	<u>Wt%</u>
Part A:	
Stearic Acid No. 63-0412 (1)	3.0
Rosswax 2540 (1)	5.9
Emerest 2314 (2)	1.7
Emerest 2316 (2)	1.7
GMS SE (3)	0.5
Mineral Oil #35 (4)	0.3
Dow Corning #344 (5)	1.5
Acetulan (6)	1.2
Jojoba Oil (7)	2.0
Escalol 507 (8)	5.0

Part B:

Water	70.7
Aloe-Vera (1:1) (9)	4.0
Triethanolamine	1.2

Part C:

Germaben IIE (10)	1.0
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Part D:

Fragrance Pina Colada (11)	0.3
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Procedure:

Heat Part A and Part B to 170F in separate heated vessels. Next add Part B to Part A with agitation until thoroughly mixed. Then add Part C under agitation and finally add Part D. Cool the batch to 135F and package.

Suppliers:

(1) Frank B. Ross Co.	(7) Arista Industries Inc.
(2) Henkel-Emery Group	(8) ISP-Van Dyk
(3) Stepan Co.	(9) Madis Botanicals Inc.
(4) Penreco Inc.	(10) ISP-Sutton Labs
(5) Dow Corning Corp.	(11) Robertet-Novarome
(6) Amerchol Corp.	

SOURCE: Frank B. Ross Co., Inc.: Suggested Formulation

General Purpose Skin Lotion

This is a simple base formulation for an all-purpose oil-in-water skin lotion. It is a light product for the face and hands. SF96 (100), dimethicone, provides emollient and anti-whitening properties as well as skin protection.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
PEG-8 Stearate/Emulsifier	1.31
Dimethicone [SF96 (100)](1)/Emollient/Anti-whitening	6.50
Myristyl Alcohol/Emollient/Viscosity	3.80
Glyceryl Stearate (and) PEG-100 Stearate/Emulsifier/ Opacifier	4.00
Sodium Dioctylsulfosuccinate(2)/Surfactant	0.17
Myristyl Lactate/Emollient	2.70
Cetyl Acetate/Emollient	2.70
Methylparaben/Preservative	0.17
Part B:	
Disodium EDTA/Chelating agent	0.05
Water/Diluent	78.60

Procedure:

1. Heat Part A and Part B to 80C.
2. Add Part A to Part B with agitation.
3. Continue to mix until product is cooled to 25C. Force-cool if needed.

Comments:

- * Methylparaben may be added to Part B or it may be substituted with Germaben II-E.
- * Greater viscosity may be achieved by replacing myristyl alcohol with cetyl, cetearyl, stearic or behenyl alcohol.
- * Greater elegance may be achieved by replacing SF96 (100) with SF1214.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Monawet MO85P, Mona Industries, Inc.

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 100

General Purpose Skin Lotion

This is a simple formulation for an all-purpose oil-in-water skin lotion. It is a light product for the face and hands. SFE839 Elastomer Dispersion, provides emollient and anti-whitening properties as well as skin protection.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
PEG-8 Stearate/Emulsifier	1.31
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone	
Crosspolymer(SFE839)(1)/Emollient/Anti-whitening	6.50
Myristyl Alcohol/Emollient/Viscosity Building Agent	3.80
Glyceryl Stearate (and) PEG-100 Stearate/Emulsifier/Opacifier	4.00
Sodium Dioctylsulfosuccinate(2)/Emulsifier	0.17
Myristyl Lactate/Emollient	2.70
Cetyl Acetate/Emollient	2.70
Methylparaben/Preservative	0.17
Part B:	
Disodium EDTA/Chelating agent	0.05
Water/Diluent	78.60

Procedure:

1. In separate vessels, heat Part A and Part B to 80C.
2. Add Part A to Part B with agitation.
3. Continue to mix until product is cooled to 25C. Force-cool if needed.

Comments:

- *Methylparaben may be added to Part B or it may be substituted with Germaben II-E, International Specialty Products (ISP)
- *Greater viscosity may be achieved by replacing myristyl alcohol with cetyl, cetearyl, stearic or behenyl alcohol.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Monawet MO85P, Mona Industries, Inc.

SOURCE: GE Silicones: Personal Care Formulary: Formula SP117

Hand and Body Lotion for Dry Skin

A non-greasy lotion designed for daily use as a moisturizing lotion on the hands or entire body. This formulation demonstrates the use of SF1632 in a moisturizing product. SF1632 is a silicone wax which melts when applied to the skin and forms an occlusive barrier which reduces water loss from the skin (TEWL). It has a light, non-greasy feel and is ideal when formulating moisturizing products.

Ingredients/Function:

	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	73.53
Disodium EDTA/Chelating agent	0.02
Butylene Glycol/Humectant	3.00
Panthenol/Moisturizer/Provitamin B	0.40
Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylparaben (and) Butylparaben (1)/Preservative	0.80

Part B:	
Cyclopentasiloxane (SF1202)(2)/Emollient	5.00
Cetearyl Methicone (SF1632)(2)/Occlusive/TEWL reduction/ Emollient	10.00
Glyceryl Stearate (and) PEG-100 Stearate/Emulsifier	1.00
Tocopherol (and) Cococaprylate/Caprate/Vitamin E/ Antioxidant	0.50

Part C:	
Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7(3)/Emulsifier	1.40

Part D:	
Fragrance (4)	0.35
Aluminum Starch Octenylsuccinate/Slip/Feel	4.00

Procedure:

1. Heat water of Part A to 75C with moderate propeller agitation. Add remaining ingredients in order listed with moderate stirring.
2. Combine Part B and heat to 75C with slow agitation. Add Part B to Part A with moderate propeller agitation. Mix for 5 minutes, then begin cooling batch.
3. At 50C add Part C to Part AB and mix with rapid propeller agitation until uniform and viscosity increases. Mix 10 minutes with moderate homogenizer agitation. Cool to 45C.
4. Add Part D to batch in order listed and mix with moderate propeller agitation for 15 minutes.
5. Cool to room temperature with continued stirring.

Trade Names/Suppliers:

- (1) Phenonip, Nipa Laboratories, Inc. (2) GE Silicones
(3) Sepigel 305, Seppic (4) Fragrance HJ-416, Shaw Mudge

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 105

Hand-Protection Lotion

<u>Ingredients:</u>		<u>Wt%</u>
A:	Polyethyleneglycol 400	2.20
	Isopropyl Myristate	2.20
	Cetyl Alcohol	0.60
	Lanolin Acid	0.60
	Stearic Acid	3.30
B:	Triethanolamine	0.60
	Propylene Glycol	5.50
	Water	82.00
C:	Wacker-Belsil CM 1000	2.20
	Preservatives, perfume, pigments	q.s.

Heat A and B to 80C. Add A to B with fast agitation. Add C.
Formulation 576 AH

Body Lotion

<u>Ingredients:</u>		<u>Wt%</u>
A:	Hostacerin WO	8.00
	Wacker-Belsil CM 1000	10.00
	Isopropyl Palmitate	10.00
B:	Water	72.00
	Preservatives, perfume, pigments	q.s.

W/O Lotion

Heat A and B to 75-80C. Stir B into A.

Temperature stability: at 45C 8 weeks.

Formulation 813 AH

Body Lotion

Thick lotion with good absorption and non-greasing properties. With UV-protection.

<u>Ingredients:</u>		<u>Wt%</u>
A:	Mineral Oil	1.00
	Cetyl Alcohol	1.00
	Stearic Acid	1.50
	Wacker-Belsil SM 6018	5.00
B:	Triethanolamine	0.80
	Propylene Glycol	3.00
	Water	85.20
C:	Parsol MCX	2.50
	Preservatives, fragrances, pigments	q.s.

Heat A and B each to 85C, stir B into A and stir cold.

Formulation 1210/1AH

SOURCE: Wacker Silicones: Suggested Formulations

Lotion with Alcohol

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 812 (Caprylic/Capric Triglyceride)	8.5
Imwitor 780K (Isostearyl Diglyceryl Succinate)	5
Softigen 701 (Glyceryl Ricinoleate)	1.5
B. Carbopolgel 2%-ig (Carbomer)	12.5
Preservative	q.s.
Water ad	100
C. Ethanol, 96%	10
Fragrance	q.s.

Preparation:

A is mixed and warmed up to about 75C. B is brought to the same temperature and gradually emulsified into A with hi-speed agitator. C is stirred in at approx. 30C.

Sport Body Lotion, Low-Viscous

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 370 (Glyceryl Stearate Citrate)	2.5
Imwitor 375	2.5
Miglyol 812 (Caprylic/Capric Triglyceride)	8
Imwitor 928 (Glyceryl Cocoate)	3
B. Keltrol F (Xanthan Gum)	0.5
Preservative	q.s.
Water ad	100

Preparation:

A is heated up to about 75C. B is mixed, brought to the same temperature and emulsified into A.

W/O-Lotion, Quickly Penetrating

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan Gel	7
Softisan 100 (Hydrogenated Coco-Glyceride)	2
Imwitor 780K (Isostearyl Diglyceryl Succinate)	3
Miglyol 812 (Caprylic/Capric Triglyceride)	8
Dynacerin 660 (Oleyl Erucate)	7
Pionier WWH soft (Ointment base)	6
Arlacel 989 (Hydrogenated Castor Oil)	2
B. Magnesium Sulphate	0.5
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is heated to approx. 75C and homogeneously stirred. B is brought to the same temperature and gradually admixed into A with hi-speed agitator. C is added at approx. 30C.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Milky Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
A: Polyoxyethylene Sorbitan Monostearate (20EO)	1.0
Sorbitan Monostearate	0.5
Polyoxyethylene Sorbitan Tetraoleate (40EO)	1.0
Stearic Acid	1.0
Cetanol	0.5
Behenyl Alcohol	0.5
Myristyl Myristate	2.0
MITD (Isotridecyl Myristate)	5.0
Liquid paraffin	10.0
Alpha-Bisabolol	0.2
Butyl Parahydroxybenzoate	0.1
B: Isoprene Glycol	5.0
Methyl Parahydroxybenzoate	0.1
Purified Water	Up to 100

- 1) Heat (A) to 80C and mix it.
- 2) Mix IPG with purified water and heat it to 80C. Dissolve Methyl Paraben into it.
3. Mix A and B. Then cool it to room temp.

Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
POE (60) Hydrogenated Castor Oil	0.5
POE (20) POP (6) Decyl Tetradecylether	0.5
Squalane	0.1
Ethanol	5.0
Isoprene Glycol	5.0
Sodium dl-Pyrrolidone Carboxylate	2.0
Citric Acid	*
Alpha-Bisabolol	0.1
Purified Water	Up to 100
*Adjust pH to 5-6 with Citric Acid.	

Hand Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
Hexadecyl alcohol	1.5
Silicone 200	1.5
Lanolin oil	2.0
Robane	3.0
Cetina	3.0
Water, perfume, preservative	q.s. to 100.0

SOURCE: Robeco Chemicals, Inc.: Suggested Formulations

Moisturizing Body Lotion-922/1

<u>Ingredients:</u>	<u>Wt%</u>
Part A:	
Deionized Water	76.10
Propylene Glycol	5.00
Trisodium EDTA	0.05
Triethanolamine	1.20
Methylparaben	0.25
Part B:	
Robane (Squalane NF)	10.00
SPM wax (Cetyl Esters)	0.25
Cetyl Alcohol	1.00
Stearic Acid	4.50
Silicone Fluid 200 (200 cs) (Dimethicone)	0.25
Propylparaben	0.10
Butylparaben	0.05
Part C:	
Deionized Water	1.00
Germall 115 (Imidazolidinyl Urea)	0.25

Moisturizing Body Lotion 922/2

<u>Ingredients:</u>	<u>Wt%</u>
Part A:	
Deionized Water	76.10
Butylene Glycol	5.00
Trisodium EDTA	0.05
Triethanolamine	1.20
Methylparaben	0.25
Part B:	
Robane (Squalane NF)	10.00
SPM Wax (Cetyl Esters)	0.25
Cetyl Alcohol	1.00
Stearic Acid	4.50
Silicone Fluid 200 (200 cs) (Dimethicone)	0.25
Propylparaben	0.10
Butylparaben	0.05
Part C:	
Deionized Water	1.00
Germall 115 (Imidazolidinyl Urea)	0.25

Procedure:

1. Mix and heat Part A and Part B to 78-80C. Stir each until uniform.
2. Add Part B to Part A and stir for 15 minutes at 78-80C.
3. Cool, with stirring at 40-42C, add Part C to batch.
4. Cool to 25C.

SOURCE: Robeco Chemicals, Inc.: Suggested Formulations

Moisturizing Body Lotion 922/3**Ingredients:****Wt%****Part A:**

Deionized Water	76.10
Isoprene Glycol	5.00
Trisodium EDTA	0.05
Triethanolamine	1.20
Methylparaben	0.25

Part B:

Robane (Squalane NF)	10.00
SPM Wax (Cetyl Esters)	0.25
Cetyl Alcohol	1.00
Stearic Acid	4.50
Silicone Fluid 200 (200 cs) (Dimethicone)	0.25
Propylparaben	0.10
Butylparaben	0.05

Part C:

Deionized Water	1.00
Germall 115 (Imidazolidinyl Urea)	0.25

Procedure:

1. Mix and heat Part A and Part B to 75-80C. Stir each until uniform.
2. Add Part B to Part A and stir for 15 minutes at 78-80C.
3. Cool, with stirring to 40-42C, add Part C to batch.
4. Cool to 25C

Emollient Body Lotion**Raw Materials:****Wt%**

Isopropyl myristate	4.0
Glyceryl monostearate	2.0
Stearic acid TP	2.6
Cetina	1.0
Robane	4.0
Veegum	1.0
Propylene Glycol	4.0
Triethanolamine	1.5
Water, perfume, preservative	q.s. to 100.0

SOURCE: Robane Chemical, Inc.: Suggested Formulations

Moisturizing Facial Lotion

A facial lotion which demonstrates the use of SF1632 in a light moisturizing product. SF1632 is a silicone wax which melts when applied to the skin and forms a semi-occlusive barrier which reduces water loss from the skin (TEWL). It has a light, non-greasy feel and is ideal when formulating moisturizing products.

Ingredient/Function:**Wt%****Part A:**

Deionized Water/Diluent	76.58
Tetrasodium EDTA/Chelating agent	0.02
Propylene Glycol/Humectant	3.00
Panthenol/Moisturizer/Provitamin B	0.50
Phenoxethanol (and) Methylparaben (and) Ethylparaben (and) Propylparaben (and) Butylparaben (1)/Preservative	0.80

Part B:

Cetearyl Methicone (SF1632)(2)/Occlusive/TEWL reduction/ Emollient	5.00
Dicaprylyl Ether/Emollient	4.00
Floraester-20/Emollient	3.00
Maleated Soybean Oil/Emollient	4.50
Cetyl Alcohol/Bodifying agent/Secondary emulsifier	1.00

Part C:

Polyacrylamide (and) C13-14 Isoparaffin (and) Laureth-7(3)/Primary emulsifier/Thickener	1.40
Floral Fragrance	0.20

Procedure:

1. Heat water of Part A to 75C with moderate propeller agitation. Add remaining ingredients in order listed with moderate stirring.
2. Combine Part B and heat to 75C with slow agitation. Add Part B to Part A with moderate propeller agitation. Mix for 5 minutes, then begin cooling batch to 60C.
3. At 60C add Part C (Sepigel, then fragrance) to Part AB and mix with rapid propeller agitation until uniform and viscosity increases. As viscosity develops, increase mixing speed.
4. Cool to room temperature with adequate agitation.

Trade Names/Suppliers:

- (1) Phenonip, Nipa Laboratories, Inc.
- (2) GE Silicones
- (3) Sepigel 305, Seppic

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 103

Moisturizing Lotion (SK-104)

<u>Raw Materials:</u>	<u>Wt%</u>
A. Amerchol L-101	8.00
Solulan 98 (Laneth-10 Acetate)	0.50
Klearol (Mineral Oil)	15.00
Propylene Glycol	5.00
Arlacel 165	1.00
Cetyl Alcohol	0.50
B. Water, Deionized	61.25
Carbopol 941 (Carbomer-941)	0.50
C. Propylene Glycol	0.70
Methyl Paraben	0.20
Propyl Paraben	0.10
D. Water, Deionized	4.50
Potassium Hydroxide (40%)	0.50
E. Water, Deionized	1.80
Germall 115 (Imidazolidinyl Urea)	0.20
F. Perfume Oil	0.25

Moisturizing Lotion (SK-105)

<u>Raw Material:</u>	<u>Wt%</u>
A. Lanolin Alcohol	0.50
Solulan 98 (Laneth-10 Acetate)	0.50
Schercemol DID (Diisopropyl Dimerate)	8.00
Propylene Glycol	4.00
Arlacel 165	1.00
Cetyl Alcohol	1.00
B. Water, Deionized	76.25
Carbopol 941 (Carbomer-941)	0.50
C. Propylene Glycol	0.70
Methyl Paraben	0.20
Propyl Paraben	0.10
D. Water, Deionized	4.50
Potassium Hydroxide (40%)	0.50
E. Water, Deionized	1.80
Germall 115 (Imidazolidinyl Urea)	0.20
F. Perfume Oil	0.25

Manufacturing Procedure:

1. Prepare Phase "A" by heating the ingredients to 75C to dissolve the solids.
2. Prepare the Carbopol solution by dispersing Carbopol 941 into water using high speed agitation until a smooth slurry is obtained. Then heat the dispersion at about 80C until a smooth viscous solution is formed.
3. Dissolve the parabens in propylene glycol by warming solution to 55C. Add Phase "C" to "B".
4. Add Phase "B" & "C" to "A" with mixing.
5. When base is at 55C, add in Phase "D" stirring until the base is completely mixed in.
6. Add Germall solution and perfume when cool.

SOURCE: Scher Chemicals, Inc.: Formulas SK-104 and SK-105

Moisturizing Lotion (SK-106)Raw Materials:

	<u>Wt%</u>
A. Lanolin Alcohol	0.50
Solulan 98 (Laneth-10 Acetate)	0.50
Schercomid AME-70 (Acetamide MEA)	8.00
Propylene Glycol	4.00
Arlacel 165	1.00
Cetyl Alcohol	1.00
B. Water, deionized	76.25
Carbopol 941 (Carbomer-941)	0.50
C. Propylene Glycol	0.70
Methyl Paraben	0.20
Propyl Paraben	0.10
D. Water, Deionized	4.50
Potassium Hydroxide (40%)	0.50
E. Water, Deionized	1.80
Germall 115 (Imidazolidinyl Urea)	0.20
F. Perfume Oil	0.25

Manufacturing Procedure:

1. Prepare Phase "A" by heating the ingredients to 75C to dissolve the solids.
2. Prepare the Carbopol solution by dispersing Carbopol 941 into water using high speed agitation until a smooth slurry is obtained. Then heat the dispersion at about 80C until a smooth viscous solution is formed.
3. Dissolve the parabens in propylene glycol by warming solution to 55C. Add Phase "C" to "B".
4. Add Phase "B & C" to "A" with mixing.
5. When base is at 55C, add in Phase "D" stirring until the base is completely mixed in.
6. Add Germall solution and perfume when cool.

SOURCE: Scher Chemicals, Inc.: Formula SK-106

Nutritive Lotion
Oil Free

<u>Ingredients/CTFA Name:</u>		<u>Wt%</u>
A-A1	Schercemol DISD/Diisostearyl Dimer Dilinoleate	2.00
	Schercemol CO/Cetyl Octanoate	12.00
	Arlacel 165/Glyceryl Stearate (and) PEG 100 Stearate	2.00
	Stearyl Alcohol	0.60
	Cetyl Alcohol	0.60
	Stearic Acid	3.00
	Silicone fl 350 cps	0.20
A2	Triethanolamine	1.00
B-B1	Deionized Water	57.50
	Carbopol 941 2% Aq. Sln.	10.00
B2	Glycerin	3.00
B3	Triethanolamine	0.20
C-	Germaben II	1.00
D-	Tocopherol Acetate	0.05
	Retinyl Palmitate	0.05
E-E1	Concentrate R	5.00
E2	Ginseng Extract	1.00
F-	Fragrance	0.20
G-	FD&C Red 4 0.10% Aq. Sln.	0.40
	FD&C Yellow 5 0.10% Aq. Sln.	0.20

Procedure:**Phase B:**

In the main beaker, disperse B1 at 75C. Add Glycerin.
Add Triethanolamine to neutralize the Carbopol gel. Mix until a smooth gel is obtained.

Phase A:

Blend A1 and A2 together at 75-80C until homogeneous.
Add Phase A to Phase B with continuous mixing at 75-80C for fifteen minutes.
Cool batch to 60C and add Phase C. Continue to cool with mixing to 37C, then add Phase D, E, F, G in sequence. Continue mixing while cooling batch to 25-28C.

SOURCE: Scher Chemicals, Inc.: Formulation L-213-2

O/W Spray LotionRaw Materials:

	<u>Wt%</u>
A. Imwitor 377 (Glyceryl Laurate/Citrate/Lactate)	2
Imwitor 928 (Glyceryl Cocoate)	3
Miglyol 812 (Caprylic/Capric Triglyceride)	8
B. Keltrol F (Xanthane based hydrogel builder)	0.5
Preservative	q.s.
Water up to	100
C. Fragrance	q.s.

Preparation:

A is heated to about 75C. B prepared and brought to the same temperature. B is emulsified into A. C is added at about 30C.

Rich Basic LotionRaw Materials:

	<u>Wt%</u>
A. Imwitor 377 (Glyceryl Laurate/Citrate/Lactate)	7
Cetyl Alcohol	2.5
Imwitor 900 (Glyceryl Monostearate)	3
Miglyol 812 (Caprylic/Capric Triglyceride)	7
B. Glycerol	3
Preservative	q.s.
Water up to	100
C. Fragrance	q.s.

Preparation:

A warmed up to about 75C. B is brought to the same temperature and is emulsified into A. C is added at about 30C.

Thin Lotion for TowelettesRaw Materials:

	<u>Wt%</u>
A. Imwitor 377 (Glyceryl Laurate/Citrate/Lactate)	1
Ampholyt JB 130/K (Cocamidopropyl Betaine)	1
Preservative	q.s.
Water up to	100

Preparation:

All components are put together, heated to about 60C and stirred while cooling.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Protective Facial Lotion with Superior Substantivity

This formulation produces a light lotion for daily facial use. It contains UVB sunscreen and exhibits superior substantivity, providing sun protection throughout the day, even when active.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Stearic Acid/pH Modifier	2.50
Cetyl Alcohol/Opacifier	1.80
Cetyl Phosphate (and) DEA Cetyl Phosphate(1)/Emulsifier	2.50
Diisostearyl Trimethylolpropane Siloxy Silicate (SF1318)(2)/Emollient/Film-former	5.00
Octyl Methoxycinnamate/UV absorber	7.00
Cyclopentasiloxane (SF1202)(2)/Emollient	5.00
Part B:	
Glycerin/Humectant	4.00
Quaternium-15/Preservative	0.10
Xanthan Gum/Thickener/Stabilizer	0.25
Fragrance	q.s.
Water/Diluent	71.85

Procedure:

1. Heat Parts A and B in separate containers to 85-90C with agitation.
2. Add Part A to Part B with high shear agitation.
3. Cool to room temperature with continued mixing.

Trade Names/Suppliers:

- (1) Amphisol, Givaudan
- (2) GE Silicones

Facial Lotion

This lotion is a water-in-oil emulsion which is an excellent product for everyday facial use. It applies easily, with a wet feel, yet leaves a non-greasy, dry, silky finish. The use of SF1328 as a water-in-oil emulsifier is demonstrated in this formulation.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Cyclomethicone (and) Dimethicone Copolyol (SF1328)(1)/Emulsifier	10.0
Cyclopentasiloxane (SF1202)(1)/Emollient (oil carrier)	8.5
Cyclopentasiloxane and Dimethicone (SF1214)(1)/Emollient/Film former	7.5
Part B:	
Glycerin/Humectant	13.0
Sodium Chloride/Stabilizer	1.0
Polysorbate-80/Emulsifier	0.2
Quaternium-15/Preservative	0.1
Deionized Water/Diluent	59.7

Procedure:

1. Combine Part A ingredients in order shown, thoroughly mixing each component until homogeneous before adding the next ingredient.
2. Mix all ingredients of Part B together.
3. Slowly add Part B to Part A with good mixing. Gradually increase agitation to high shear as mixture thickens. Continue agitation for 5-10 minutes. Mixture will become very thick.
4. Mill on homogenizer for 1-2 minutes.

SOURCE: GE Silicones: Formulas SP 104 and SP 102

Protective Skin Lotion

This formulation employs Lubrajel TW which moisturizes the skin. The Panalane and stearyl alcohol leaves a protective occlusive barrier which slows down moisture efflux.

<u>Material:</u>	<u>Wt%</u>
1 Deionized Water	67.19
2 Oil of Orchids (WS)	1.50
3 Triethanolamine	0.24
4 Diammonium EDTA	0.10
5 Panalane L14E	7.00
6 Stearic Acid	2.00
7 Stearyl Alcohol	1.60
8 Polysorbate 80	1.00
9 Glycerol Monostearate	0.60
10 Propylene Glycol	1.00
11 Methyl Paraben	0.18
12 Propyl Paraben	0.05
13 Lubrajel TW	17.50
14 Floral Gardenia Fragrance 169-724	0.02
15 Rose Fragrance 34844	0.02

Procedure:

1. Prepare Phase "A" by combining components 1,2,3 and 4 in a vessel suitable for heating. Heat to 70-80C with stirring until homogeneous.
2. Prepare Phase "B" by combining components 5,6,7,8 and 9. Heat to 70-80C with stirring until all solids are melted.
3. Prepare Phase "C" by combining components 10,11 and 12. Heat to 50C with stirring until all solids are dissolved.
4. While maintaining 70-80C, slowly add Phase "B" to Phase "A" with high speed dispersion blade mixing.
5. Allow mixture to cool with continued mixing to less than 50C. Switch to low shear mixing and add Phase "C", the Lubrajel and the two fragrances.

SOURCE: Guardian Laboratories: Formulation #90213-A

Protective Skin Lotion with Sunscreen (SP107)

A water-in-oil formulation producing a light protective lotion with a SPF of 5-6 for daily use on the face or other exposed skin areas. Although the formulation is water-in-oil, it dries to a dry, non-greasy feel due to the use of silicone emulsifier SF1328.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Cyclomethicone (SF1202) (1)/Emollient (oil carrier)	12.0
Mineral Oil (light)/Emollient (solubilizer)	1.0
Octyl Methoxycinnamate/UVB protection	5.0
Dimethicone (and) Trimethylsiloxysilicate (SS4267) (1)/Film-former	3.0
Cyclomethicone (and) Dimethicone Copolyol (SF1328) (1)/Emulsifier	10.0
Lanolin/Emollient	0.5
Titanium Dioxide (micronized)/UVA/UVB protection	3.0

Part B:

Polysorbate-80/Emulsifier	0.2
Glycerin/Humectant	3.0
Sodium Chloride/Stabilizer	1.0
Quaternium-15/Preservative	0.1
Water	61.2

Procedure:

1. Combine Part A ingredients in order shown, thoroughly mixing each until homogeneous before adding the next ingredient. The solution should remain clear until TiO₂ is added.
2. Mix together all Part B ingredients.
3. Slowly add Part B to Part A with good mixing. Gradually increase agitation to high shear as mixture thickens. Continue agitation for 5-10 minutes. Mixture will become very thick.
4. Mill on homogenizer for 1-2 minutes.

Trade Names/Suppliers:

(1) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula SC 102

Shea Butter Hand and Body Lotion**Concept Statement:**

An elegant, emollient lotion and lactylate-based formula that provides consistent moisturization, softening and a pleasant skin feel.

Ingredients/Function:

	<u>Wt%</u>
1. Distilled/Deionized Water	77.05
2. Propylene Glycol/Humectant	3.00
3. Glycerine/Humectant	3.00
4. Tetrasodium EDTA/Stability	0.10
5. Methylparaben/Preservative	0.15
6. Pationic SSL (Sodium Stearoyl Lactylate)/Lactylate	0.45
7. Rita EGMS (Glycol Stearate)/Emulsifier	2.00
8. Rita GMS (Glyceryl Stearate)/Emulsifier	2.00
9. Shebu Refined (Shea Butter)/Emollient	2.00
10. Hydrogenated Coconut Oil/Emollient	4.00
11. Rita IPP (Isopropyl Palmitate)/Emollient	5.00
12. Ritalan (Lanolin Oil)/Emollient	1.00
13. Propylparaben/Preservative	0.05
14. DMDM Hydantoin/Preservative	0.20
15. Fragrance/Odor	q.s.

Compounding Procedure:

Combine items 1-5 and heat to 80C. Mix items 6-13 and heat to 80C. Add oil phase to water phase. Cool to 35C. Add items 14 and 15.

SOURCE: R.I.T.A. Corp.: LI Ref. No. 124-67B Formula

Silk Protein Skin Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
Mineral Oil	3.0
Mackester SP (Glycol Stearate (and) Stearamide MEA)	2.0
Emulsifying Wax N.F.	3.0
Glyceryl Stearate & PEG-100 Stearate	2.0
Polysorbate 80	0.66
Sorbitan Palmitate	0.6
Glycerin	2.0
Mackamide AME-100 (Acetamide MEA)	1.0
Mackpro NSP (Oleyl/Palmityl/Palmitoleamidopropyl/Silk-hydroxypropyl Dimonium Chloride)	2.5
Mackstat DM (DMDM Hydantoin)	qs
D.I. Water, Fragrance	qs to 100.0

Procedure:

1. Melt first eight components in separate container to 75C.
2. In mixing tank, heat water to 78C then add Mackpro NSP.
3. Start mixing; add hot mixture of eight components slowly with good agitation; mix well for 20 minutes.
4. Start slow cooling with good mixing without aeration.
5. At 45C, add Mackstat DM and fragrance; mix until blended.
6. Adjust pH, if necessary, to 4.8-5.0

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Enriched Moisturizing Lotion (Before & After Tanning)

<u>Raw Materials:</u>	<u>Wt%</u>
Sesame Oil U.S.P.	15.0
Polysynlane	20.0
Glyceryl Monostearate	3.0
Isopropyl Myristate	10.0
Carbopol 934	0.2
Propylene Glycol	10.0
Triethanolamine	1.0
Anhydrous Lanolin	5.0
Water	ad 100.0

Other Uses:

1. Polysynlane has food additive approval from the Welfare Ministry of Japan and was authorized for use as an additive for a chewing gum base.
2. Polysynlane is a refined hydrogenated polyisobutene, which has FDA approval (Subpart 121.2511) for use as a plasticizer in polyethylene food wrap.
3. Polysynlane has found use as a special lubricant for fine instruments and watches, and is being investigated as an ultra low temperature lubricant and motor oil additive.

SOURCE: Polyether Corp.: Suggested Formulation

Skin Lightening LotionIngredients:

	<u>Wt%</u>
Phase A:	
Water deionised	40.70
Stabileze 06	0.80

Phase B:

Glyceryl Stearate and PEG-100 Stearate	6.50
Glyceryl stearate (Cerasynt SD)	4.00
Isocetyl stearate (Ceraphyl 494)	2.00
Octyldodecyl Stearoyl Stearate (Ceraphyl 847)	2.00
Diisopropyl Adipate (Ceraphyl 230)	2.50
Octyl palmitate (Ceraphyl 368)	3.00
Octyl methoxy cinnamate (Escacol 557)	4.00
Benzophenone (Escacol 567)	3.00
Octyl Salicylate (Escacol 587)	3.00

Phase C:

Water, deionised	10.00
Polyvinylpyrrolidone (Povidern SK3)	1.00
Diazolidinyl Urea (Germall Plus)	0.20
Lactic acid (Purac PH 90)	4.50
Sodium lactate (Purasal S/PF 60)	9.00
Propylene Glycol	3.00
Fragrance	q.s.

Procedure:

1. In phase A, disperse Stabileze 06 in water and heat to 80 degrees Celsius with constant stirring until a translucent gel is obtained.
2. Cool down to 60 degrees Celsius and add triethanolamine and mix well. A clear gel will form.
1. Heat phase B to 70 degrees Celsius and stir until uniform.
2. Add Phase B to Phase A and homogenize.
3. In Phase C, dissolve Povidern and Germall Plus in deionised water. Then add in Purac PH 90, Purac S/PF 60 and propylene glycol with mixing after each addition.
6. Add Phase C to mixture in step 4 at 40-45 degrees Celsius. Continue stirring to room temperature.

Note: pH of lotion should be in the range of 4-4.5.

To date formula passed 1 month stability test @ 50 degrees Celsius.

SOURCE: Purac America Inc.: ISP Formulation

Substantive Skin Lotion Using Polymeric Emulsifiers

A skin lotion which uses SF1318 as an emollient/film-former. SF1318 provides a breathable barrier which is very substantive, keeping active ingredients on the skin and providing water resistant properties. This is a simple formulation to demonstrate the film-forming properties of SF1318.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	85.05
Disodium EDTA/Chelating agent	0.05
Methylparaben/Preservative	0.20
Propylene Glycol/Humectant	2.00
Part B:	
Diisostearoyl Trimethylolpropane Siloxy Silicate (SF1318)(1)/Emollient/Film-former	10.00
Propylparaben/Preservative	0.10
Acrylates/C10-30 Alkyl Acrylate Crosspolymer(2)/ Polymeric emulsifier	0.25
Carbomer(3)/Thickener	0.35
Oleth-10/Solubilizer	0.30
Fragrance(4)	0.15
Part C:	
Triethanolamine/Neutralizer	1.50
Quaternium-15/Preservative	0.05

Procedure:

1. Heat water of Part A to 60C. Add remaining ingredients of Part A with moderate propeller agitation. Mix for 10 minutes.
2. Combine Part B with sweep agitation at ambient temperature. Mix until a smooth "paste" is obtained.
3. Add Part B to Part A with rapid propeller agitation. Mix 30 minutes or longer to ensure that polymers are completely dispersed.
4. Cool with moderate agitation to 40C. Add Part C to batch with moderate propeller agitation. Mix 20 minutes at 40C and cool to room temperature with agitation.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Pemulen TR-1, B.F. Goodrich Co.
- (3) Carbopol 981, B.F. Goodrich Co.
- (4) Fragrance HB-635, Shaw Mudge

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 106

Velvety Body Lotion

A water-in-oil formulation which demonstrates the use of SF1528 as an emulsifier. The product applies as a rich moisturizing lotion, yet dries to a dry, non-greasy feel. SFE839 Elastomer Dispersion provides a soft, velvety feel to the skin and helps to produce a dry, non-tacky, non-greasy afterfeel.

<u>Ingredients/Function:</u>	<u>Wt%</u>
Part A:	
Sorbitan Oleate/Co-emulsifier	0.6
Cyclopentasiloxane (and) Dimethicone Copolyol(SF1528)(1)/Emulsifier	10.0
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer(SFE839)(1)/Emollient/Detackifier	12.0
Cyclopentasiloxane(SF1202)(1)/Emollient	4.0
Part B:	
Glycerin/Humectant	1.0
Sodium Chloride/Stabilizer	1.0
Quaternium-15/Preservative	0.1
Water/Diluent	71.3

Velvety Body Lotion

A water-in-oil formulation which demonstrates the use of SF1328 as an emulsifier. The product applies as a rich moisturizing lotion, yet dries to a dry, non-greasy feel. SF1214 provides a soft, velvety feel to the skin. SF1202, cyclopentasiloxane, helps to produce a dry, non-tacky, non-greasy afterfeel.

<u>Ingredients/Function:</u>	<u>Wt%</u>
Part A:	
Sorbitan Oleate/Co-emulsifier	0.6
Cyclomethicone (and) Dimethicone Copolyol(SF1328)(1)/Emulsifier	10.0
Cyclopentasiloxane(SF1202)(1)/Emollient/Detackifier	6.0
Cyclopentasiloxane (and) Dimethicone(SF1214)(1)/Smooth/Silky Feel	10.0
Part B:	
Glycerin/Humectant	1.0
Sodium Chloride/Stabilizer	1.0
Quaternium-15/Preservative	0.1
Water/Diluent	71.3

Procedure (Both Formulas):

1. Combine Part A ingredients in order shown, thoroughly mixing each component until homogeneous before adding next ingredient.
2. Mix all ingredients of Part B together. Stir until homogeneous.
3. Slowly add Part B to Part A with good mixing. Gradually increase agitation to high shear as mixture thickens. Continue agitation for 20 minutes. Mixture will become very thick.
3. Homogenize for 1-2 minutes.

SOURCE: GE Silicones: Formulas SP116 and SP118

Velvety Body Lotion with Sunscreens

SFE839, Elastomer Dispersion is a substantive emollient, providing extraordinary smooth, silky and luxurious feel. This sunscreen gives a moisturizing and cushioning feel with smooth, soft and powdery finish.

Ingredient/Function:

	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	74.13
Tetrasodium EDTA/Chelating agent	0.05
PEG-8/Humectant	4.00
Phenoxyethanol (and) Methylparaben (and) Butylparaben (and) Ethylparaben (and) Propylparaben (1)/Preservative	0.25
Magnesium Aluminum Silicate/Thickener	0.25

Part B:

Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone Crosspolymer (SFE839) (2)/Film-former/Emollient	7.00
Octyl Methoxycinnamate/UV absorber	7.00
Octyl Salicylate/UV absorber	3.00
Benzophenone-3/UV absorber	3.00
Acrylates/C10-30 Alkyl Acrylate Crosspolymer (3)/ Emulsifier/Thickener	0.30
Carbomer (4)/Thickener	0.15
Sorbitan Oleate/Emulsifier	0.20

Part C:

Fragrance	0.12
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Part D:

Triethanolamine 99%/Neutralizer	0.55
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Procedure:

1. Heat water of Part A to 75C. Add remaining ingredients in order with moderate propeller agitation, making sure that all parabens have dissolved. Mix for 15 minutes, while cooling to 50C.
2. Combine Part B with sweep agitation at ambient temperature. Mix until a smooth "paste" is obtained.
3. Add Part B at room temperature to Part A (at 50C) with rapid propeller agitation. Mix for 30 minutes, or longer to ensure that the polymers are completely dispersed.
4. Cool with agitation to 45C. Add Part C to batch with propeller agitation. Mix 10 minutes.
5. Add Part D to batch at 40C. Mix with moderate agitation for 20 minutes. Cool to room temperature.
6. The pH should be 6-7.

Trade Names/Suppliers:

- (1) Phenonip, Nipa
- (2) GE Silicones
- (3) Pemulen TR-1, B.F. Goodrich
- (4) Carbopol-2984, B.F. Goodrich

SOURCE: GE Silicones: Personal Care Formulary: Formula SC106

Section VIII

Shampoos

Aloe Vera Gel Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Aloe Vera Gel Liquid (1:1)	50.0
Water	14.5
Mackernium 007 (Polyquaternium 7)	3.0
Mackstat SBC-8 (Mild Shampoo Blend)	32.0
Mackstat DM (DMDM Hydantoin)	qs
Dye, Fragrance	qs to 100.0

Procedure:

1. Disperse Mackernium 007 in water and Aloe Vera Gel Liquid.
2. Add Mackadet SBC-8 and heat to 45C.
3. Blend until homogeneous.
4. Adjust viscosity with Sodium Chloride.
5. Add remaining components and blend until clear.
6. Cool to room temperature.

Acid Balanced Conditioning Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
TEA Lauryl Sulfate (40%)	35.0
Mackam 35HP (Cocamidopropyl Betaine)	10.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	6.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add components to water.
2. Heat to 40C.
3. Blend until clear.
4. Adjust pH to 4.0 with Citric Acid.
5. Cool to room temperature.

All Purpose Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet SBC-8 (Mild Shampoo Blend)	20.0
Sodium Chloride	qs
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackadet SBC-8 to water.
2. Blend until clear.
3. Add Mackstat DM.
4. Adjust viscosity to 2000-3000 cps with Sodium Chloride.
5. Add Dye and Fragrance.
6. Blend until clear.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Amide Free Shampoo
Formulated to be amide-free

<u>Ingredients:</u>	<u>Wt%</u>
Water	q.s. to 100
Carbopol 1382 (Goodrich)	0.25
Quickpearl II	5.00
Chembetaine OL-30	0.50
Sulfochem ES-2	26.00
Sulfochem SLS	12.00
Chembetaine C	4.00
Chembetaine S	3.00
Fragrance, color, preservatives, etc.	q.s.
NaCl	(0.50 typical) q.s.

Blending Procedure:

Blend ingredients in order listed, allowing Carbopol to solubilize completely before adding remaining ingredients. Add NaCl to desired viscosity.

Typical Physical Properties:

Appearance: Pearly liquid

Viscosity: Brookfield LVT, Sp. 3, 6 rpm, 25C: 9,000 cps

Formulation No. F1001

Premium Clarifying Shampoo

Preliminary formulation. Normal, dry, fine, and damaged hair type versions may be made by increasing the amount of dimethicone to achieve more conditioning or increasing the amount of EA-2 and ALS to increase cleansing.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem EA-2	35.00
Sulfochem ALS	32.00
Preservatives	q.s.
Amidex CME	1.00
Water, soft	to 100
AXS	0.75
Panthenol	0.50
Fragrance, color, etc.	q.s.
Other ingredients	q.s.

Blending Procedure:

With medium agitation, mix water, Sulfochem EA-2, and ALS in main vessel. Heat to 145-155F, add Amidex CME and citric acid, and mix until solution is clear and homogeneous. Turn on cooling and add preservatives, fragrance, color, and remaining ingredients. Adjust pH to 5.0-5.5 with citric acid. Adjust viscosity to 5,000-7,500 cps (NH₄Cl to bring viscosity up, AXS to bring it down).

Formulation No. F1006

SOURCE: Chemron Corp.: Suggested Formulations

Anti-Dandruff Lotion Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Part A:	
Veegum	1.0
Methocel FYM	0.8
Water	qs to 100.0
Part B:	
Sodium Olefin Sulfonate (40%)	35.0
Mackamide LLM (Lauramide DEA)	4.0
Mackamide S (Soyamide DEA)	1.0
Mackpro NLP (Quaternium-79 Hydrolyzed Collagen)	2.0
Part C:	
Zinc Omadine (48%)	4.0

Procedure:

1. Thoroughly disperse Veegum in water at 70C.
2. Slowly add Methocel FYM and blend until homogeneous.
3. Add Part B to Part A and adjust pH to 6.5 with Citric Acid.
4. Add Zinc Omadine (Part C) and blend until homogeneous.

Anti-Dandruff Cream Type Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Lauryl Sulfate (30%)	61.8
Mackam 35HP (Cocamidopropyl Betaine)	10.0
Sodium Chloride	7.0
Triple Pressed Stearic Acid	5.0
Mackamide LLM (Lauramide DEA)	4.0
Propylene Glycol	4.0
Zinc Pyrithione (48%)	4.0
Mackamide PKM (Palmkernelamide MEA)	2.0
Caustic Soda (50%)	1.6
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Heat Stearic Acid, Mackamide LLM, Mackamide PKM, and Propylene Glycol to 70C.
2. Heat SLS, Mackam 35HP, Sodium Chloride, Caustic Soda, and water to 70C.
3. Add oil to water and cool to 55C.
4. Slowly add Zinc Pyrithione.
5. Cool to 45C and add remaining components.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Antidandruff Shampoo
clear, 13.6% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Octopirox/Piroctone Olamine	0.50
B Water	10.00
C Genapol LRO liquid/Sodium Laureth Sulfate	30.00
D Hostapon KCG/Sodium Cocoyl Glutamate	5.00
Fragrance	0.30
E Polymer JR 400/Polyquaternium-10	0.30
F Water	40.90
G Dyestuff solution	q.s.
Extrapon Chamomile Special	2.00
Genagen CAB/Cocamidopropyl Betaine	8.00
Genapol L-3/Laureth-3	1.50
H Sodium chloride	1.50

Procedure:

1. Mix A and B.
 2. Add C to 1 and keep stirring until a clear solution has been obtained.
 3. Stir the components of D one after another into 1.
 4. Dissolve E in F under stirring while heating slightly and then stir into 1.
 5. Stir the components of G one after another into 1.
 6. If necessary adjust the pH.
 7. Finally adjust the viscosity with H.
- Formula B I/6144

Antidandruff Shampoo
clear, 13.1% active ingredient

<u>Recipe:</u>	<u>Wt%</u>
A Octopirox/Piroctone Olamine	0.50
B Water	10.00
C Genapol LRO liquid/Sodium Laureth Sulfate	30.00
D Genapol SBE/Disodium Laureth Sulfosuccinate	5.00
Fragrance	0.30
Merquat 550/Polyquaternium-7	1.00
Water	43.20
Dyestuff solution	q.s.
Genagen CAB/Cocamidopropyl Betaine	8.00
Genapol L-3/Laureth-3	0.50
E Sodium chloride	1.50

Procedure:

1. Mix A and B.
 2. Add C to 1 and keep stirring until a clear solution has been obtained.
 3. Stir the components of D one after another into 1.
 4. If necessary adjust the pH.
 5. Finally adjust the viscosity with E.
- Formula B I/6143

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Antidandruff Shampoo

clear, 12.3% active ingredient

Recipe:

	<u>Wt%</u>
A Octopirox/Piroctone Olamine	0.50
B Water	10.00
C Genapol LRO liquid/Sodium Laureth Sulfate	30.00
D Belsil DMC 6032/Dimethicone Copolyol Acetate	0.50
Fragrance	0.30
E Allantoin	0.30
F Water	46.40
G Dyestuff solution	q.s.
Panthenol	1.00
Genagen CAB/Cocamidopropyl Betaine	8.00
Genapol L-3/Laureth-3	1.50
H Sodium chloride	1.50

Procedure:

1. Mix A and B.
 2. Add C to 1 and keep stirring until a clear solution has been obtained.
 3. Stir the components of D one after another into 1.
 4. Dissolve E in F under stirring while heating slightly and then stir into 1.
 5. Stir the components of G one after another into 1.
 6. If necessary adjust the pH.
 7. Finally adjust the viscosity with H.
- Formula B I/6146

Conditioning Shampoo

with a silk-lustre effect, 20.6% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
Hostapon SCID/Sodium Cocoyl Isethionate	2.00
Coconut fatty acid diethanolamide	3.00
B Water	37.20
C Hostapon KCG/Sodium Cocoyl Glutamate	5.00
D Belsil DMC 6032/Dimethicone Copolyol Acetate	1.00
Fragrance	0.30
Genapol L-3/Laureth-3	4.00
Genagen CAB/Cocamidopropyl Betaine	9.00
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate	4.00
Dyestuff solution	q.s.
Preservative	q.s.
D Sodium chloride	2.00

Procedure:

1. Dissolve the components of A stirring into B and warming to approx. 60C.
 2. Cool down and add the components of C at approx. 35C while stirring.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula B I/6148

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Apricot Shower Shampoo Gel

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Sodium Lauryl Sulfate (30%)	25.1
Schercotaine APAB (40%)/Apricotamidopropyl Betaine	12.6
Schercamox CAA-G (35%)/Cocamidopropylamine Oxide	3.8
Schercoquat APAS (90%)/Apricotamidopropyl Ethyl-dimonium Ethosulfate	0.6
Herbasol Extract Apricot/Apricot Extract	1.0
Preservative	0.2
Color, Fragrance	q.s.
Water (deionized)	56.7

Procedure:

1. Heat water to 50C. With stirring add Schercoquat APAS to dissolve.
 2. Add Schercotaine APAB, mix.
 3. Add Schercamox CAA-G, mix.
 4. Add preservative, mix.
 5. Add Apricot Extract, mix.
 6. Increase stirring and add Sodium Lauryl Sulfate. Mix thoroughly at high rpm until uniform.
 7. To clear up bubble formation, warm finished product at 45-50C.
- Formulation 221-89

Clear 2-in-1 Shampoo

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Deionized Water	54.4
Schercoquat DAS	3.0
Rhodacal A246/L/Sodium C14-16 Olefin Sulfonate	30.0
Schercomid AME-70/Acetamide MEA	2.0
Schercotaine CAB-G/Cocamidopropyl Betaine	10.0
Schercoquat IALA/Isostearamidopropyl Laurylacetodimonium Chloride	0.6
Preservative	q.s.

Procedure:

Dissolve Schercoquat DAS in water with gentle heat to 40C. Add the rest of the ingredients one by one in order listed, mixing well after each addition.

Formulation SK 140

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Clear Conditioning Shampoo with SM2101

A conditioning shampoo designed for daily use on normal to dry hair. SM2101 is an excellent conditioner providing softness and combability. SF1188A provides additional conditioning, enhances wet combing and stabilizes foam. Both products are readily removed, and therefore build-up is not a problem. As is, this formulation is clear but may be opacified if desired.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	38.32
Guar Hydroxypropyltrimonium Chloride (1)/Conditioner/ Thickener	0.75
Propylparaben/Preservative	0.05
Methylparaben/Preservative	0.15

Part B:	
Ammonium Lauryl Sulfate (26%)/Primary surfactant	24.00
Ammonium Laureth Sulfate (28%)/Primary surfactant	14.30
Cocoamidopropyl Betaine (35%)/Secondary surfactant	11.43

Part C:	
Laureamide DEA/Foam booster	2.00
Cocamide MEA/Foam booster	2.50

Part D:	
Trimethylsilylamodimethicone (and) Isolaureth-6 (and) Octoxynol-40 (SM2101) (2)/Conditioner	4.00
Dimethicone Copolyol (SF1188A or SF1288A) (2)/ Conditioner/Foam stabilizer	1.00

Part E:	
Polysorbate-80/Solubilizer	1.00
Fragrance (3)	0.50

Procedure:

1. Combine parabens. Slowly sprinkle mixture into water with rapid propeller agitation. Add guar hydroxypropyltrimonium chloride in same manner.
2. When thoroughly solvated, reduce to slow agitation. Add ingredients of Part B individually, allowing each ingredient to be thoroughly mixed. After addition of Part B is complete, heat to 65C with continued slow agitation.
3. Melt together Part C, add to Part AB at 65C. Remove heat and continue stirring.
4. Add Part D below 45C with slow-moderate propeller mixing for 15 minutes.
5. Mix fragrance into polysorbate-80 and add to batch below 40C. Continue stirring to room temperature.

Trade Names/Suppliers:

- (1) Jaguar C-13S, Rhone-Poulenc
- (2) GE Silicones
- (3) Fragrance J-6636, Bell Fragrance & Flavor

SOURCE: GE Silicones: Personal Care Formulary: Formula SH103

Clear Conditioning Shampoo with SM2115

SM2115 is a 20% active emulsion of a substantive, non-curable amine functional silicone fluid. It is a microemulsion which remains clear upon dilution, enabling the formulation of a clear product. This is an excellent conditioning shampoo which provides a soft, smooth, silky feel to hair and puts an end to dry, frizzy ends.

Materials/Function:

	Wt%
Part A:	
Water/Diluent	37.12
Methylparaben/Preservative	0.15
Propylparaben/Preservative	0.05

Part B:

Dimethicone Copolyol (SF1188A or SF1288) (1)/	
Conditioning agent/Foam stabilizer	1.00
Ammonium Lauryl Sulfate (26%)/Primary surfactant	24.00
Ammonium Laureth Sulfate (28%)/Primary surfactant	14.30
Cocamidopropyl Betaine/Secondary surfactant	11.43

Part C:

Cocamide MEA/Foam booster	4.00
PEG-150 Pentaerthrityl Tetrastearate (2)/Thickener	0.95

Part D:

Trimethylsilylamodimethicone (and) Octoxynol-40 (and)	
Isolaureth-6 (and) Glycerin (SM2115) (1)/Conditioning agent	2.50

Part E:

Fragrance	q.s.
Polysorbate-80/Solubilizer	2.50
Glycerin/Solubilizer/Humectant	2.00

Procedure:

1. Heat water to 65C. Feather in methylparaben and propylparaben until dissolved with rapid agitation.
2. Reduce agitation to moderate agitation. Add ingredients of Part B to Part A in the order listed.
3. Melt Part C in a separate container. Add to Part AB when melted.
4. Cool mixture to 40C and add Part D.
5. In a separate container, mix together Part E. Add to the mixture when temperature is 40C or less.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) Croda, Inc.

SOURCE: GE Silicones: Personal Care Formulary: Formula SH 104

Clear Shampoo

<u>Component:</u>	<u>Wt%</u>
Texapon NSO/Sodium Laureth Sulfate	27.0
Dehyton PK 45/Cocamidopropyl Betaine	6.0
Plantacare 818/Coco Glucoside	4.0
Lamesoft PO 65/Coco-Glucoside (and) Glyceryl Oleate	2.5
Jaguar C 162/Guar Hydroxypropyl Trimonium Chloride	0.1
NaCl	0.9
Water	59.5
Perfume/preservative	q.s.
pH-value: 5.5	
Viscosity in mPas: 6,600	
Preparation in the Laboratory:	
Swell Jaguar C 162 in water (pH approx. 5-6). Add Texapon NSO by stirring. Add Lamesoft PO 65 and mix until homogeneous. Incorporate successively the other ingredients. Adjust the pH value.	
Formulation No.: 98/040/2	

Clear Shampoo with Gluadin WP

<u>Component:</u>	<u>Wt%</u>
Plantacare 1200 UP/Lauryl Glucoside	4.0
Texapon K 14S 70 spec./Sodium Myreth Sulfate	11.0
Dehyton K/Cocamidopropyl Betaine	7.0
Gluadin WP/Hydrolyzed Wheat Protein	1.5
Water, de-ionized	72.6
Arlypon F/Laureth-2	0.9
NaCl	3.0
pH-value: 5.5	
Viscosity mPas, 23C: 1950	
Preparations in the Laboratory:	
Add all ingredients in the order as shown. Mix at room temperature. Set pH value, then adjust viscosity with salt.	
Formulation DE/97/030/2	

Gel-Shampoo with Gluadin WP

<u>Component:</u>	<u>Wt%</u>
Plantacare 1200 UP/Lauryl Glucoside	6.0
Texapon NSO/Sodium Laureth Sulfate	31.0
Texapon SB 3F/Disodium Laureth Sulfosuccinate	8.0
Gluadin WP/Hydrolyzed Wheat Protein	2.0
Water, de-ionized	49.0
NaCl	4.0
Viscosity (mPas) Brookfield RVF, 23C, Sp4, 20 rpm: 4,250	
Preparations in the Laboratory:	
Add all ingredients in the order as shown. Mix at room temperature. Set pH-value, then adjust viscosity with salt.	
Formulation DE/97/030/1	

SOURCE: Henkel KGaA: Care Chemicals Division: Suggested Formulas

Conditioner Shampoo

<u>Component:</u>	<u>Wt%</u>
Texapon N70/Sodium Laureth Sulfate	10.0
Plantacare 818UP/Coco Glucoside	4.0
Dehyton K/Cocamidopropyl Betaine	5.0
Lamesoft PO65/Coco-Glucoside (and) Glyceryl Oleate	1.5
Euperlan PK3000AM/Glycol Distearate (and) Laureth-4 (and) Cocamidopropyl Betaine	3.2
Polymer JR400/Polyquaternium-10	0.3
Sodium chloride	1.5
Water de-ionized	ad 100

pH-Value: 5.5

Viscosity in mPas: Brookfield, RVF, 23C, Spindle 4,
rpm 10: 8500Preparation in the Laboratory:

Add the ingredients in the order as shown. Mix at room temperature.

Formulation 97/007/2

Conditioner Shampoo

<u>Component:</u>	<u>Wt%</u>
Texapon NSO/Sodium Laureth Sulfate	27.0
Dehyton PK 45/Cocamidopropyl Betaine	3.7
Lamesoft PO 65/Coco-Glucoside (and) Glyceryl Oleate	5.0
Euperlan PK 1200/Coco-Glucoside (and) Glycol Distearate (and) Glycerin	3.0
Cosmedia Guar C261/Guar Hydroxypropyl Trimonium Chloride	0.1
Arlypon F-T/Laureth-2	1.55
Water	59.65
Perfume/preservative	n.B.

WAS%: 11.6

pH-value: 5.7

Viscosity in mPas: 9,300

Preparation in the Laboratory:

The Cosmedia-Swelling is prepared with water. Add Texapon NSO and Lamesoft PO 65 and mix until homogeneous. Incorporate successively Euperlan PK 1200 and Dehyton PK 45 and adjust viscosity with Arlypon F-T.

Formulation No.: 94/193/236

SOURCE: Henkel KGaA: Care Chemicals Division: Suggested Formulas

Conditioner Shampoo

<u>Component:</u>	<u>Wt%</u>
Cosmedia Guar C 261/Guar Hydroxypropyl Trimonium Chloride	0.5
Cetiol HE/PEG-7 Glyceryl Cocoate	0.5
Texapon K14S spec./Sodium Myreth Sulfate Wheat Protein	40.0
Lamepon S/Potassium Cocoyl Hydrolyzed Collagen	10.0
Euperlan PK3000AM/Glycol Distearate (and) Laureth-4 (and)	
Cocamidopropyl Betaine	2.0
Glycerin 86%	2.0
Nutrilan I	5.0
Arlypon F/Laureth-2	2.5
Water	ad 100.0

pH Value: 5.5

Preparation in the Laboratory:

Mix ingredients at room temperature. Set pH value, then adjust viscosity with salt.

Formulation No.: 91/165/11

Shampoo with PIT

<u>Component:</u>	<u>Wt%</u>
I. Texapon NSO/Sodium Laureth Sulfate	40.0
Dehyton K/Cocamidopropyl Betaine	12.5
Lamesoft PW45/Lipid layer enhancer	5.0
II. Cosmedia Guar C261N/Guar Hydroxypropyl Trimonium Chloride	0.25
III. Methocel E4M Premium EP/Hydroxypropyl Methylcellulose	1.5
Water and preservation	ad 100

Viscosity mPas: Brookfield, RVF 20C, Spindle 4: 6000

pH-value: 5.5

Preparation in the Laboratory:

Of Methocel E4M Premium EP and Water has to be manufactured a clear swelling. In this swelling Cosmedia Guar C261N has to be strewed and homogeneous distributed. With addition of citric acid the pH value will be slightly acidified, which means that Cosmedia Guar is also starting to swell. After completed swelling Texapon NSO, Dehyton K and Lamesoft PW45 will be stirred homogeneous into the swelling. At the end the pH value will be focused.

Formulation No.: 93/176/97

SOURCE: Henkel KGaA: Care Chemicals Division: Suggested Formulas

Conditioning Shampoo

This formula uses Incroquat HO-80PG, a quaternary conditioning agent suitable for 2-in-1 shampoos, in combination with Incromine Oxide C and Crodafos SG to give hair improved wet combing and a soft, dry feel. Incroquat HO-80 PG has been found to work especially well with polymeric quaternaries, like the Jaguar C14S used here, as it appears to enhance the effects of these polyquats, resulting in greater conditioning.

<u>Ingredients:</u>	<u>Weight%</u>
Part A:	
Deionized Water	57.05
Guar Hydroxypropyltrimonium Chloride	0.35
Citric Acid	0.10

Part B:	
SLES (3 mole)	15.00
SLS	5.00
Incronam 30 (Cocoamidopropyl Betaine)	6.00
Incromide LR (Lauramide DEA)	3.00
Crodafos SG (PPG-5-Ceteth-10 Phosphate)	2.00
Glycerol HE (PEG-7 Glyceryl Cocoate)	1.00
Incroquat HO-80PG (Dioleoylamidoethyl Hydroxyethylmonium Methosulfate)	2.50
Glycol Stearate	0.50
Incromine Oxide C (Cocamidopropylamine Oxide)	2.00

Part C:	
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben	1.00
Hexylene Glycol	3.00
Dimethicone Copolyol	1.50

Procedure:

Combine Part A ingredients with good mixing. Heat Part A ingredients to 45C. Add Part B ingredients to Part A as listed. Heat batch up to 70-75C with good mixing. Make sure all ingredients are dissolved. Start cooling batch. At 50C, add Part C.

pH=5.5+-0.5

Viscosity=3,000 cps+-10%, Spindle #4 @ 10 rpm

N.A.T.C. Approved

SOURCE: Croda Inc.: Formulation SH-96

Conditioning Shampoo

This formula uses Incroquat Behenyl HE, a quaternary conditioning agent suitable for 2-in-1 shampoos, in combination with Incromine Oxide C and Crodafos SG to give hair improved wet combing and a soft, dry feel. Incroquat Behenyl HE also works especially well with polymeric quaternaries, like the Jaguar C14S used here, and has been found to enhance the effects of these polyquats, resulting in greater conditioning.

<u>Ingredients:</u>	<u>Weight%</u>
Part A:	
Deionized Water	59.55
Guar Hydroxypropyltrimonium Chloride	0.35
Citric Acid	0.10

Part B:	
SLES (3 mol)	15.00
SLS	5.00
Incronam 30 (Cocamidopropyl Betaine)	6.00
Incromine Oxide C (Cocamidopropylamine Oxide)	2.00
Incromide LR (Lauramide DEA)	3.00
Crodafos SG (PPG-5-Ceteth-10 Phosphate)	2.00
Glycerox HE (PEG-7 Glyceryl Cocoate)	1.00
Incroquat Behenyl HE (Behenamidopropyl Hydroxyethyl Dimonium Chloride)	2.50

Part C:	
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben	1.00
Hexylene Glycol	2.50

Procedure:

Combine Part A ingredients with good mixing. Heat Part A ingredients to 45C. Add Part B ingredients to Part A as listed. Heat batch up to 70-75C with good mixing. Make sure all ingredients are dissolved. Start cooling batch. At 50C, add Part C.

pH=5.0+-0.5

Viscosity=10,000+-10%, Spindle #4 @ 10 rpm.

N.A.T.C. Approved

SOURCE: Croda Inc.: Formulation SH-97

Conditioning Shampoo

Prototype formula for a premium 2-in-1 shampoo.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem EA-2	34.90
Sulfochem ALS	31.00
Preservative (Kathon CG)	q.s.
Amidex CME	1.20
EGDS	1.00
Water, soft	to 100
AXS	0.75
Propylene glycol	0.65
Fragrance, color, etc.	q.s.
Quatrex S	0.50
Dimethicone	1.25

Blending Procedure:

With medium agitation, mix water and ALS in vessel. Heat to 145-155F, add EGDS, and mix until melted. Turn on cooling and add EA-2, Quatrex S, Dimethicone, and citric acid. Add Amidex CME (temperature must still be above 125F). Premix AXS, propylene glycol, and zinc, and add to main vessel. When temperature reaches 45F, add Kathon CG, fragrance, and color. Adjust pH to 5.5-6.5 with citric acid. Adjust viscosity to 5,000-7,500 cps (use NaCl to bring viscosity up and AXS to bring it down).
Formulation No. F1009

Conditioning Shampoo

Prototype formulation for a mild, high-foaming conditioning shampoo.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem DLS	40.00
Preservative	q.s.
Amidex CME	1.20
EGDS	1.00
Water, soft	to 100
AXS	0.75
Propylene glycol	0.65
Fragrance, color, etc.	q.s.
Quatrex S	0.50
Dimethicone	0.75

Blending Procedure:

With medium agitation, mix water and DLS in vessel. Heat to 145-155F, add EGDS, and mix until melted. Turn on cooling and add Quatrex S, Dimethicone, and citric acid. Add Amidex CME (temperature must still be above 125F). Add AXS and propylene glycol. When temperature reaches 45F, add preservative, fragrance, and color. Adjust pH to 5.5-6.5 with citric acid. Adjust viscosity to 5,000-7,500 cps (use NaCl to bring viscosity up and AXS to bring it down).
Formulation No. F1014

SOURCE: Chemron Corp.: Suggested Formulations

Conditioning Shampoo

Starting formulation for an economical conditioning shampoo

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem B-209OP	35.00
Water, soft	63.10
Fragrance	0.15
NaCl	typical: 0.55
Citric acid	typical: 0.10
Preservatives	q.s.
Quatrex S	0.30
Dimethicone	0.75
Color	q.s.

Blending Procedure:

With medium agitation, mix water, Sulfochem B-209, Quatrex S, and dimethicone in main vessel. Add citric acid and mix until solution is homogeneous. Add preservatives, fragrance, color, and remaining ingredients. Adjust pH to 6.0-6.5 with citric acid. Adjust viscosity to 7,500-9,500 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 7,500-9,500 cps

pH: 6.0-6.5

Formulation No. E3132

Regular Shampoo

Starting formulation for a high quality shampoo for normal hair.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem B-209	35.00
Water, soft	63.99
Fragrance	0.15
NaCl	typical: 0.75
Citric acid	typical: 0.12
Color	q.s.
Preservatives	q.s.

Blending Procedure:

With medium agitation, mix water and Sulfochem B-209 in main vessel. Mix until solution is clear and homogeneous. Add preservatives, fragrance, color, and remaining ingredients. Adjust pH to 6.75-7.75 with citric acid. Adjust viscosity to 10,000-12,000 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 10,000-12,000 cps

pH: 6.75-7.75

Formulation No. E3127

SOURCE: Chemron Corp.: Suggested Formulations

Conditioning Shampoo with Botanicals

Conditioning shampoo containing natural ingredients to enhance the conditioning and shine of the hair. SM2169 is utilized to provide combability, shine and softness.

<u>Materials/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	52.85
Polyquaternium-10 (1)/Thickener/Conditioner	0.40
Part B:	
Sodium Laureth Sulfate (and) Glycol Stearate (30%)/Primary surfactant	20.00
Disodium Laureth Sulfosuccinate/Primary surfactant	10.00
Cocamidopropyl Betaine/Secondary surfactant	4.00
PEG-120 Jojoba Acid (and) PEG-120 Jojoba Alcohol (2)/Conditioning/Shine	3.50
Part C:	
Lauramide DEA/Foam booster	4.00
Part D:	
Panthenol/Conditioning/Shine	0.50
Nettle Extract (and) Chamomile Extract (and) Comfrey Extract (and) Henna Extract (and) Rosemary Extract (3)/Botanicals/Conditioning	0.50
Part E:	
Dimethicone (and) Laureth-4 (and) Laureth-23 (SM2169)(4)/Conditioning/Shine	3.40
Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Butylparaben (and) Propylparaben (5)/Preservative	0.80
Fragrance	q.s.
Disodium EDTA/Preservative	0.05
Part F:	
Color	q.s.

Procedure:

1. Charge water of Part A. With medium propeller stirring, slowly sprinkle in the polyquaternium-10. Mix 20 minutes until all polyquaternium-10 is dispersed and heat to 50C.
2. With batch at 50C, slowly add Part B to Part A in given order and mix until dissolved.
3. Add Part C and slowly mix until dissolved. Begin force-cooling of batch to 45C.
4. Add Part D to batch in given order and mix with slow to moderate propeller agitation.
5. Add Part E to batch in given order and mix with slow to moderate propeller agitation.
6. Adjust color with Part F. Mix until uniform.

Trade Names/Suppliers:

- (1) Celquat SC-240, National Starch and Chemical Corp.
- (2) International Flora Technologies, Ltd.
- (3) Vege-Tech
- (4) GE Silicones
- (5) Nipa Laboratories, Inc.

SOURCE: GE Silicones: Personal Care Formulary: Formula SH 102

Conditioning Shampoo with SM2169

SM2169 is a 60% non-ionic emulsion of a 60,000 centistoke dimethicone fluid. In conditioning shampoos, it is a conditioning agent providing combability, softness and shine. This formulation provides conditioning for normal hair.

Materials/Function:**Part A:**

	Wt%
Polyquaternium-10 (1)/Thickener/Conditioner	0.4
Polyquaternium-10 (2)/Thickener/Conditioner	0.4
Distilled Water	56.0

Part B:

Ammonium Lauryl Sulfate (and) Ammonium Laureth Sulfate (and) Cocamidopropyl Betaine (and) Cocamide DEA (42%)(3)/Surfactant/Foam booster	38.0
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Part C:

Ethylene Glycol Distearate/Pearlizing agent	1.0
Ceteareth-20/Emulsifier	0.3

Part D:

Dimethicone (and) Laureth-4 (and) Laureth-23 (SM2169)(4)/ Conditioning agent	3.4
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl- paraben (and) Propylparaben (5)/Preservative	0.5
33% Citric Acid and/or 25% NaOH/pH adjuster	q.s.
Distilled Water	q.s.

Procedure:

1. Stir Part A ingredients until polyquaternium-10 materials are completely dissolved.
2. Add Part B ingredient to Part A with moderate agitation.
3. Heat mixture of Part A and Part B to 60-65C.
4. Melt Part C ingredients and add to warm mixture.
5. With continued agitation, cool mix below 40C.
6. Add SM2169 and preservative.
7. Adjust pH to approximately 6.0.
8. Add fragrance and water to bring to 100%.

Trade Names/Suppliers:

- (1) Ucare Polymer LR-400, Amerchol Corp.
- (2) Ucare Polymer LR-30M, Amerchol Corp.
- (3) Stepanol AEG, Stepan Co.
- (4) GE Silicones
- (5) Sutton Labs

SOURCE: GE Silicones: Personal Care Formulary: Formula SH101

Conditioning Shampoo with Viscasil 60M

Viscasil 60M is a high molecular weight dimethicone fluid. It provides conditioning in a daily use conditioning shampoo. A suspension system is typically used to provide formulation stability.

<u>Materials/Function:</u>	<u>Wt%</u>
Part A:	
Sodium Laureth Sulfate (28%)/Primary surfactant	35.7
Cocamide DEA/Secondary surfactant	4.0
Part B:	
Water/Diluent	56.9
Acrylates/C10-30 Alkyl Acrylate Crosspolymer (1)/ Thickening/Suspending	0.8
Methylchloroisothiazoline (and) Methylisothiazolinone (2)/ Preservative	0.1
Part C:	
Sodium Hydroxide (50%)/Neutralizer	q.s.
Part D:	
Dimethicone (Viscasil 60M) (3)/Conditioning/Shine	2.5
Part E:	
Citric Acid (33%)/pH adjustment	q.s.

Procedure:

1. Mix Part B ingredients with moderate agitation until completely dissolved.
2. Add Part A to Part B with moderate agitation.
3. Add Part C to pH=7.5.
4. Add Part D slowly with moderate agitation.
6. Add Part E to pH=6.0

Trade Names/Suppliers:

- (1) Carbopol, BF. Goodrich Co.
- (2) Rohm and Haas Co.
- (3) GE Silicones

SOURCE: GE Silicones: Personal Care Formulary: Formula SH 100

Cream Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate LO-Special (Disodium Lauryl Sulfosuccinate)	88.0
Cetyl Alcohol	2.0
Brij 52	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Fragrance	qs to 100.0

Solids, %: 40.0(+/-1.0)

pH (as is): 5.5-6.0

Appearance: Pearly Cream

Procedure:

1. Add Cetyl Alcohol, Brij 52 and Water to Mackanate LO-Special.
2. Heat to 70C.
3. Blend until homogeneous.
4. Adjust pH to 5.5-6.0 with Sodium Hydroxide.
5. Cool to 50C and add Mackstat DM and Fragrance.
6. Adjust solids to 40.0(+/-1.0)% at this point.
7. Cool to room temperature.

Mild Conditioning Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate EL (Disodium Laureth Sulfosuccinate)	10.0
Mackam 35 (Cocamidopropyl Betaine)	25.0
Sodium Laureth Sulfate (60%)	10.0
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfosuccinate)	1.0
Mackamide C (Cocamide DEA)	2.0
Polysorbate 20	1.0
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

pH: 5.5-6.7

Viscosity (cps, 25C): 600-1200

Procedure:

1. Add surfactants to water.
2. Start mixing at room temperature until all components are clearly dissolved.
3. Blend Fragrance with Polysorbate and add to batch.
4. Adjust pH to 5.5-6.7 with Citric Acid.
5. Adjust viscosity to 600-1200 cps with Sodium Chloride.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Dry/Damaged Hair Shampoo

Starting formulation for a mild shampoo for dry or damaged hair.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem SBS	37.00
Water, soft	62.33
Fragrance	0.20
NaCl	q.s.
Preservatives	q.s.
Citric acid	typical: 0.02
Quatrex S	0.25
Panthenol	0.20

Blending Procedure:

Charge mixing vessel with water and Sulfochem SBS, and mix until dissolved. Adjust pH with citric acid to 6.5-7.0. Add preservatives, color, fragrance, and remaining ingredients. Adjust viscosity to 2,500-3,500 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 2,500-3,500 cps

pH: 6.5-7.0

Formulation No. E3147

Botanical Shampoo

Starting formulation for a very mild shampoo containing botanical extracts.

<u>Ingredients:</u>	<u>Wt%</u>
Sulfochem SBS	35.00
Water, soft	63.85
Fragrance	0.15
NaCl	q.s.
Preservatives	q.s.
Botanical extracts	1.00
Color	q.s.

Blending Procedure:

Charge mixing vessel with water and Sulfochem SBS, and mix until dissolved. Adjust pH with citric acid to 6.5-7.5. Add preservatives, color, fragrance, and remaining ingredients. Adjust viscosity to 2,000-3,500 cps with sodium chloride.

Typical Physical Properties:

Viscosity: 2,000-3,500 cps

pH: 6.5-7.5

Formulation No. E3146

SOURCE: Chemron Corp.: Suggested Formulations

Hair Shampoo

Hair Shampoo containing Bentone EW rheological additive.

<u>Ingredients:</u>	<u>Wt%</u>
Sodium Laureth Sulphate	28.0
Cocamidopropylbetaine	6.0
Coco Glucoside	6.0
Glycol Distearate, Steareth 4	3.0
Dimethicone Copolyol	0.2
D-Panthenol	1.0
Bentone EW (3% in dist. water)	50.0
Methyldibromoglutaronitrile, Propylene Glycol	0.2
Laureth 3	2.0
Lactic Acid	qs to pH 5.5-6.0
Demineralized Water	bal to 100%

Method of Manufacture:

1. Prepare a dispersion of Bentone EW in most of the distilled water.
2. Using a propeller stirrer, add the surfactants one by one, in the order listed.
3. Add the pearlizing agent and the silicone.
4. Dissolve the panthenol in the remaining water by warming slightly, and then add to the batch.
5. Add the perfume and preservative, then add laureth 3.
6. Adjust the pH if required.

Bentone EW is incorporated at a level of 1.5% w/w. This level was selected to ensure easy handling during product manufacture and also to minimize cost. However, it is high enough to demonstrate a considerable difference in performance from the control product when evaluated in salon trials.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Hair Shampoo

for daily use, clear, 15.9% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
B Genapol AMS/TEA-PEG-3 Cocamide Sulfate	6.00
Fragrance	0.30
Water	46.45
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	10.00
Genapol L-3/Laureth-3	1.00
C Sodium chloride	1.25

Procedure:

1. Stir the components of B one after another into A.
 2. If necessary adjust the pH.
 3. Finally adjust the viscosity with C.
- Formula B I/1132

Hair Shampoo

clear, 17.7% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
B Genapol SBE/Disodium Laureth Sulfosuccinate	12.30
Fragrance	0.30
Genapol L-3/Laureth-3	1.00
Water	41.15
Panthenol	0.50
Genagen CAB/Cocamidopropyl Betaine	8.00
Dyestuff solution	q.s.
Preservative	q.s.
C Sodium chloride	1.75

Procedure:

1. Stir the components of B one after another into A.
 2. If necessary adjust the pH.
 3. Finally adjust the viscosity with C.
- Formula B I/1133

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Hair Shampoo

clear, 13.8% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
B Genapol SBE/Disodium Laureth Sulfosuccinate	6.00
Fragrance	0.30
Water	55.00
Genapol L-3/Laureth-3	2.00
Genagen CAB/Cocamidopropyl Betaine	5.00
Dyestuff solution	q.s.
Preservative	q.s.
C Sodium chloride	1.70

Procedure:

1. Stir the components of B one after another into A.
2. If necessary adjust the pH.
3. Finally adjust the viscosity with C.

Formula B I/1128

Hair Shampoo

for daily use, clear, 15.6% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	30.00
B Genapol SBE/Disodium Laureth Sulfosuccinate	6.00
Hostapon KCG/Sodium Cocoyl Glutamate	5.00
Fragrance	0.30
Water	48.70
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	6.00
Genapol L-3/Laureth-3	2.00
C Sodium chloride	2.00

Procedure:

1. Stir the components of B one after another into A.
2. If necessary adjust the pH.
3. Finally adjust the viscosity with C.

Formula B I/1134

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Hair Shampoo

for dry hair, with a pearl-lustre effect, 16.0% active ingredient

Recipe:

	<u>Wt%</u>
A Genapol LRO liquid/Sodium Laureth Sulfate	30.00
Polymer JR 400/Polyquaternium-10	0.20
Hostapon SCID/Sodium Cocoyl Isethionate	3.00
B Water	49.00
C Hostapon KCG/Sodium Cocoyl Glutamate	6.00
Fragrance	0.30
Genapol L-3/Laureth-3	0.50
Genapol PGM/Sodium Laureth Sulfate, Glycol Distearate, Cocamide MEA	4.00
Genagen CAB/Cocamidopropyl Betaine	6.00
Dyestuff solution	q.s.
Preservative	q.s.
D Sodium chloride	1.00

Procedure:

1. Stir A into B while heating to approx. 60C.
 2. Cool down and add the components of C at approx. 35C while stirring.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula B I/2131

Hair Shampoo

with a pearl-lustre effect, 19.1% active ingredient

Recipe:

	<u>Wt%</u>
A Hostapon SCID/Sodium Cocoyl Isethionate	6.40
B Water	37.60
C Genapol L-3/Laureth-3	2.00
Hostapon KCG/Sodium Cocoyl Glutamate	7.20
Genapol LRO liquid/Sodium Laureth Sulfate	40.00
Fragrance	0.30
Genapol PGL/Glycol Distearate, Cocamide MEA, PPG-4 Deceth-4	5.00
Dyestuff solution	q.s.
Preservative	q.s.
D Sodium chloride	1.50

Procedure:

1. Stir A into B while heating to approx. 60C and cool down.
 2. At approx. 30C stir the components of C into 1.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula B I/2132

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Hair Shampoo

with a pearl-lustre effect, 16.6% active ingredient

Recipe:

	Wt%
A Hostapon SCID/Sodium Cocoyl Isethionate	3.60
B Water	43.95
C Genapol LRO liquid/Sodium Laureth Sulfate	40.00
Fragrance	0.30
Genapol PGM/Sodium Laureth Sulfate, Glycol Distearate, Cocamide MEA	5.00
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	6.00
D Sodium chloride	1.15

Procedure:

1. Stir A into B while heating to approx. 60C and cool down.
 2. At approx. 30C stir the components of C into 1.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula B I/2134

Conditioning Shampoo

clear, 17.2% active ingredient

Recipe:

	Wt%
A Genapol LRO liquid/Sodium Laureth Sulfate	35.00
B Genapol AMS/TEA-PEG-3 Cocamide Sulfate	6.00
Belsil DMC 6032/Dimethicone Copolyol Acetate	0.50
Merquat 550/Polyquaternium-7	1.00
Fragrance	0.30
Genapol L-3/Laureth-3	2.00
C Water	41.70
Glycerin	2.00
Genagen CAB 818/Cocamidopropyl Betaine	10.00
Dyestuff solution	q.s.
Preservative	q.s.
D Sodium chloride	1.50

Procedure:

1. Add the components of B into A and keep stirring until a clear solution has been obtained.
 2. Stir the components of C one after another into 1.
 3. If necessary adjust the pH.
 4. Finally adjust the viscosity with D.
- Formula B I/6147

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

High Foaming Adult Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet BW-173 (Sodium Lauryl Sulfate (and) Cocamide DEA (and) Cocamidopropyl Betaine)	32.0
Sodium Chloride	0.1-1.0
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

This shampoo will be a viscous liquid with a pH of 6.0-7.0 and a concentration of approximately 12-13%.

Procedure:

1. Completely disperse Mackadet BW-173 in warm water (approximately 40C).
2. Add appropriate amount of Sodium Chloride and blend until clear and homogeneous.
3. Add Citric Acid, if necessary, to adjust pH to 6.0-7.0.
4. Add Paragon III, Fragrance, and Dye.
5. Cool and fill.

Wheat Germ Conditioning Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate OPS (Disodium Oleamido MIPA Sulfosuccinate)	20.0
Sodium Laureth Sulfate (30%)	24.0
Mackanate WGD (Disodium Wheatgermamido PEG-2 Sulfosuccinate)	8.0
Mackam WGB (Wheatgermamidopropyl Betaine)	5.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add surfactants to water.
2. Heat to 40C.
3. Adjust pH to 5.5 with Citric Acid.
4. Add remaining components.
5. Adjust viscosity to 2000 cps with Sodium Chloride.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

High Foaming 2 in 1 Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Ammonium Lauryl Sulfate (28%)	65.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	6.0
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfosuccinate)	4.0
Mackester EGDS (Glycol Distearate)	1.0
Mackamide PKM (Palmkernelamide MEA)	2.0
Mackernium 007 (Polyquaternium 7)	0.4
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Combine first five components and heat to 70C with continuous mixing.
2. Dilute Mackernium 007 in remaining water and slowly add to the blend.
3. Blend until product is homogeneous and cool to 50C.
4. Add Mackstat DM, Dye, and Fragrance.
5. Adjust pH to 5.0-6.0 with Citric Acid and cool.

Silicone Free 2:1 Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Ammonium Lauryl Sulfate (30%)	40.0
Mackanate LA (Diammonium Lauryl Sulfosuccinate)	20.0
Mackalene 426 (Isostearamidopropyl Morpholine Lactate)	6.0
Mackamide CMA (Cocamide MEA)	2.0
Mackernium 007 (Polyquaternium 7)	1.2
Mackester EGDS (Glycol Distearate)	1.0
Sodium Chloride	0.8
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add first seven components to water.
2. Heat to 70C.
3. Cool to 50C and add Paragon, Dye, and Fragrance.
4. Adjust pH to 5.5-6.0 with citric acid.
5. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Highly Pearlescent Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Sodium Laureth Sulfate (60%)	20.0
Mackamide C (Cocamide DEA)	2.0
Mackester SP (Glycol Stearate (and) Stearamide MEA)	2.0
Stearic Acid	2.0
Magnesium Sulfate (7H ₂ O)	6.0
Diethanolamine	0.67
Paragon II (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
D.I. Water, Dye, Fragrance	qs to 100.0

pH: 7.5-8.0

Viscosity (cps, 25C): 1000-2500

Procedure:

1. Heat water to 75C and add Magnesium Sulfate; dissolve completely.
2. Add other surfactants and DEA, then add waxes.
3. Keep temperature at 70C for 20 minutes; start cooling slowly.
4. At 35C add remainder of components and cool while mixing to room temperature.
5. Adjust pH to 7.5-8.0 with dilute TEA or dilute Sulfuric Acid.

Economy Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet SBC-8 (Mild Shampoo Blend)	10.0
Sodium Chloride	qs
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackadet SBC-8 to water and blend until clear.
2. Add Mackstat DM.
3. Adjust viscosity to 3000-4000 cps with Sodium Chloride.
4. Add Dye and Fragrance and blend until clear.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Natural Conditioning Shampoo-Pearlescent

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water (Deionized)	52.50
Ethylene Glycol Monostearate/Glycol Stearate	1.0
Schercoquat SOAS (90%)/Soyamidopropyl Ethyldimonium Ethosulfate	1.5
Schercotaine CAB-G (35%)/Cocamidopropyl Betaine	20.0
Schercamox CAA-G (35%)/Disodium Oleamido PEG-2 Sulfosuccinate	7.0
Sodium Lauryl Ether Sulfate(30%)/Sodium Laureth (3.0 EO) Sulfate	18.0
Preservative	q.s.
Fragrance	q.s.

Procedure:

1. Heat water to 60C.
2. Gently melt Ethylene Glycol Monostearate (m.p.-56-60C) and, with stirring, add to water.
3. Add Schercoquat SOAS to dissolve.
4. Add Schercotaine CAB-G, followed by Schercamox CAA-G.
5. Slowly add Sodium Lauryl Ether Sulfate, mix thoroughly, as viscosity will build rapidly.
6. Cool, add Preservative and Fragrance.

Formula SK-156

Shower-Shampoo Gel

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Sodium Lauryl Sulfate (30%)	20
Alpha Olefin Sulfonate (40%)/Sodium C14-16 Olefin Sulfonate	10
Schercopol OMES-Na (35%)/Disodium Oleamido PEG-2 Sulfosuccinate	10
Schercotaine CAB-G (35%)/Cocamidopropyl Betaine	10
Schercamox CAA-G (35%)/Cocamidopropylamine Oxide	3
Schercoquat IAS-LC (90%)/Isostearamidopropyl Ethyl Dimonium Ethosulfate	1
Color, Fragrance, Preservative	q.s.
Water (deionized)	q.s. to 100

Procedure:

1. Heat water to 50C. With stirring add Schercoquat IAS-LC to dissolve.
2. Add Schercotaine CAB-G.
3. Add Schercamox CAA-G and Schercopol OMES-Na.
4. Slowly add Alpha Olefin Sulfonate, viscosity builds slightly.
5. Increase stirring and slowly add Sodium Lauryl Sulfate. Mix thoroughly at high rpm until uniform.
6. To clear up bubble formation heat finished product in an oven (at 45-50C).

Typical Specifications:

Activity: 19%

Viscosity @ 25C: 16,000 cps (without fragrance)

pH @ 25C: 6.8

Formula SO-006

SOURCE: Scher Chemicals, Inc.: Formulas SK-156 and SO-006

Natural Mild (Apricot) Conditioning Shampoo

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Schercoquat APAS/Apricotamidopropyl Ethyldimonium Ethosulfate	0.5
Schercotaine APAB (40%)/Apricot Amidopropyl Betaine	6.0
Schercotaine CAB-G (45%)/Cocamidopropyl Betaine	14.0
Sipon ES-2 (27%)/Sodium Lauryl Ether Sulfate	18.0
Herbasol Extract Apricot/Apricot Extract	1.0
Schercomid SAP/Apricot Kernel DEA	1.0
Preservative	0.2
Water (deionized)	59.3
Color, Fragrance	q.s.

Procedure:

1. Heat water to 50C. With stirring add Schercoquat APAS to dissolve.
 2. Add preservative, mix.
 3. Add Schercotaine APAB & Schercotaine CAB-G. Heat & mix to 50C until uniform.
 4. Add Schercomid SAP, mix.
 5. Add Apricot Extract, mix.
 6. Add Sipon ES-2. Mix thoroughly until uniform.
- Formula 220-195

**Conditioning Shampoo
(Self Preserved)**

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water (Deionized)	48.5
Schercoquat IIS-LC (98%)/Isostearyl Ethyl Imidonium Ethosulfate	1.5
Schercotaine UAB (35%)/Bis (Undecylenic Amidopropyl Dimethyl Glycine)	10.0
Schercotaine CAB-G (45%)/Cocamidopropyl Betaine	10.0
Schercopol OMS-Na (35%)/Disodium Oleamido MEA Sulfosuccinate	10.0
Sodium Lauryl Ether Sulfate (30%)/Sodium Laureth (2 OEO) Sulfate	20.0
Fragrance	q.s.

Procedure:

1. Heat water to 45C. With stirring add Schercoquat IIS-LC to dissolve.
2. Add Schercotaine CAB-G and Schercotaine UAB.
3. Add Schercopol OMS-Na.
4. Slowly add Sodium Lauryl Ether Sulfate; mix thoroughly as viscosity will build rapidly.
5. Cool, q.s. with fragrance.

Typical Specifications:

Activity: 19%

Viscosity @ 25C: 2600 cps (without Fragrance)

Formula SO-0027

SOURCE: Scher Chemicals, Inc.: Formula 220-195 & SO-0027

Natural Mild (Wheat Germ) Conditioning Shampoo

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Schercoquat WOAS/Wheat Germ Amidopropyl Ethyldimonium Ethosulfate	0.5
Schercotaine WOAB/Wheat Germ Amidopropyl Betaine	6.0
Schercotaine CAB-G (45%)/Cocamidopropyl Betaine	14.0
Sipon ES-2 (27%)/Sodium Lauryl Ether Sulfate	18.0
Herbasol Extract Wheat Germ/Wheat Germ Extract	1.0
Schercomid SWG/Wheat Germ Diethanolamide	1.0
Preservative	0.2
Water (deionized)	59.3
Color, Fragrance	q.s.

Procedure:

1. Heat water to 50C. With stirring add Schercoquat WOAS to dissolve.
 2. Add preservative, mix.
 3. Add Schercotaine WOAB & Schercotaine CAB-G. Heat & mix to 50C until uniform.
 4. Add Schercomid SWG, mix.
 5. Add Wheat Germ Extract, mix.
 6. Add Sipon ES-2. Mix thoroughly until uniform.
- Formula SK 151

Clear Moisturizing Shampoo

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water	53.3
Schercoquat IALA/Isostearamidopropyl Laurylacetodimonium Chloride	2.5
Sodium Lauryl Sulfate	35.0
Schercomid AME-70/Acetamide MEA	5.0
Schercomid SCO-EX/Cocamide DEA	4.0
Perfume	q.s.
Preservative	0.2

Procedure:

1. Dissolve Schercoquat IALA in 60C water. Add Schercomid AME-70.
 2. Add while mixing, Sodium Lauryl Sulfate and Schercomid SCO-EX.
 3. Mix until uniform.
 4. At 35-40C add preservative.
 5. When cool, add fragrance.
- Formula SK 150

SOURCE: Scher Chemicals, Inc.: Formulas SK 150 and SK 151

Natural Mild Conditioning Shampoo
(With Wheat Germ)

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water (Deionized)	46.5
Schercoquat WOAS (90%)/Wheat Germamidopropyl Ethyl-dimonium Ethosulfate	0.5
Schercotaine CAB-G (45%)/Cocamidopropyl Betaine	20.0
Schercopol OMES-Na (35%)/Disodium Oleamido PEG-2 Sulfosuccinate	10.0
Sodium Lauryl Ether Sulfate (30%)/Sodium Laureth (3.0 EO) Sulfate	20.0
Schercomid SWG/Wheat Germamide DEA	3.0
Preservative	q.s.
Fragrance	q.s.

Procedure:

1. Heat water to 45C. With stirring add Schercoquat WOAS to dissolve.
2. Add Schercotaine CAB-G, followed by Schercopol OMES-Na.
3. Add Sodium Lauryl Ether Sulfate.
4. Add Schercomid SWG; mix thoroughly, as viscosity will build.
5. Cool, q.s. with Preservative and Fragrance.

Typical Specifications:

Activity: 20%
 Viscosity @ 25C: 2900 cps (without fragrance)
 pH @ 25C: 5.5

Conditioning Shampoo for Dry Scalp

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Part A:	
Water (Distilled)	34.00
Na Lauryl Sulfate	20.00
Schercotaine CAB-Z/Cocamidopropyl Betaine-Zinc	20.00
Part B:	
Water (Distilled)	20.00
Schercoquat IAS-LC/Isostearamidopropyl Ethyl Dimonium Ethosulfate	1.00
Part C:	
Schercomid SL-ML/Lauramide DEA	5.00
Part D:	
Fragrance	q.s.
Preservative	q.s.

Procedure:

1. Prepare Part A, stirring until a clear and uniform solution is formed.
2. Dissolve Schercoquat IAS-LC in water. Add solution to Part A, warming slightly if necessary to produce a clear solution.
3. Add Part C to Part D.

SOURCE: Scher Chemicals, Inc.: Formulary

Pearlescent Shampoo Concentrate

<u>Raw Materials:</u>	<u>Wt%</u>
TEA Lauryl Sulfate	50.0
Mackamide LLM (Lauramide DEA)	30.0
Mackester SP (Glycol Stearate (and) Stearamide MEA)	5.0
Propylene Glycol	5.0
Sodium Chloride	1.0
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add first five components to water.
2. Heat to 70C and blend until homogeneous.
3. Cool to 40C and add Paragon III, Dye, Fragrance.
4. Adjust pH to 7.5 with Phosphoric Acid.

NOTE: Product can be diluted one pint to a gallon with water.
Viscosity can be controlled by regulating the propylene glycol.

Neutralizer Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate OM (Disodium Oleamido MEA Sulfosuccinate)	30.0
Sodium Laureth Sulfate (30%)	20.0
Mackamine CAO (Cocamidopropylamine Oxide)	6.0
Mackamine WGO (Wheatgermamidopropylamine Oxide)	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Solids, %: 19.5

pH: 5.0-5.5

Viscosity (cps, 25C): 1500

Procedure:

1. Add surfactants to water and blend until clear.
2. Adjust pH to 5.0-5.5 with Citric Acid.
3. Add Dye and Fragrance.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Premium High Foaming Mild Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet CA (Sodium Laureth Sulfate (and) Sodium Lauryl Sulfate (and) Disodium Oleamido MEA Sulfosuccinate (and) Cocamide DEA (and) Cocamidopropyl Betaine)	32.0
Sodium Chloride	qs
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

This shampoo will be a viscous liquid with a pH of 6.0-7.0 and a concentration of approximately 9-10%.

Procedure:

1. Completely disperse Mackadet CA in warm water (approximately 40C).
2. Add appropriate amount of Sodium Chloride and blend until clear and homogeneous.
3. Add Citric Acid, if necessary, to adjust pH to 6.0-7.0.
4. Add Paragon III, Dye, and Fragrance.
5. Cool and fill.

Economic High Foaming All-Purpose Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackadet CA (Sodium Laureth Sulfate (and) Sodium Lauryl Sulfate (and) Disodium Oleamido MEA Sulfosuccinate (and) Cocamide DEA (and) Cocamidopropyl Betaine)	20.0
Sodium Chloride	1.0-2.0
Paragon III (Phenoxyethanol (and) DMDM Hydantoin (and) Methylparaben (and) Propylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

This shampoo will be a viscous liquid with a pH of 6.0-7.0 and a concentration of approximately 9-10%.

Procedure:

1. Completely disperse Mackadet CA in warm water (approximately 40C).
2. Add appropriate amount of Sodium Chloride and blend until clear and homogeneous.
3. Add Citric Acid, if necessary, to adjust pH to 6.0-7.0.
4. Add Paragon III, Dye, and Fragrance.
5. Cool and fill.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Shampoo for Permed Hair

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate OP (Disodium Oleamido MIPA Sulfosuccinate)	20.0
Mackanate CP (Disodium Cocamido MIPA Sulfosuccinate)	12.0
Sodium Laureth Sulfate (30%)	15.0
Mackamine WGO (Wheatgermamidopropylamine Oxide)	4.0
Mackalene 716 (Wheatgermamidopropyl Dimethylamine Lactate)	1.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add surfactants to water.
2. Heat to 40C.
3. Blend until clear.
4. Adjust pH to 6.0 with Citric Acid.
5. Add remaining components.
6. Adjust viscosity to 2000 cps with Sodium Chloride.

Shampoo for Color-Treated Hair

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate CP (Disodium Cocamido MIPA Sulfosuccinate)	30.0
Ammonium Lauryl Sulfate (28%)	25.0
Mackamine CAO (Cocamidopropylamine Oxide)	7.0
Mackanate WGD (Disodium Wheatgermamido PEG-2 Sulfosuccinate)	2.0
Sodium Chloride	2.0
Water, Dye, Preservative, Fragrance	qs to 100.0

Solids, %: 22.0

pH: 6.2

Viscosity (cps, 25C): 2300

Procedure:

1. Add surfactants to water and blend until clear.
2. Adjust pH to 6.0-6.5 with Citric Acid or Sodium Hydroxide.
3. Adjust viscosity with Sodium Chloride.
4. Add dye, preservative and fragrance.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Shampoo with Unicerin C-30

<u>Raw Materials:</u>		<u>Wt%</u>
A	1 Water	66.95
	2 Propylene Glycol	1.50
	3 Uniphen P-23	0.25
	4 Unicide U-13	0.40
	5 Citric Acid	0.30
	6 Carrageenan (Chrondus Crispus)	2.50
B	7 Decyl Glucoside	24.00
	8 Uniphen P-23	0.50
	9 Fragrance	0.40
C	10 FD&C Blue No. (C.I. 42090)	0.20
D	11 Unicerin C-30	3.00

Procedure:

Manufacturing is best performed in a closed apparatus (as eg. Fryma, Krieger) provided with vacuum and a speed-regulated stirrer with rotor-stator homogenizer. The microbiological quality of the demineralized water must be checked carefully.

1. Presoak 11 in aqua conservans (preserved solution containing 0.4% Uniphen P-23 and 0.3% Unicide U-13) and leave the suspension for 24 h at room temperature to soften Unicerin C-30.
2. Dissolve 3 in 1 and 2 at 100C. Let cool down to 40C and dissolve 4 and 5. Disperse 6 with a propeller stirrer at high speed. Continue stirring at reduced speed for 30 minutes, then homogenize intensively for 3 minutes and let cool overnight.
3. Dissolve separately 8 and 9 in 7. Prevent foam building (see note below).
4. At reduced stirrer speed suck B from below into A and mix further 15 minutes, then homogenize for additional 3 minutes at medium intensity.
5. Add 10 and mix 10 minutes, then homogenize 3 minutes at low speed.
6. Add 1 at low stirrer speed as long until a homogeneous distribution is obtained.

NOTE:

If manufacturing equipment is not provided with vacuum, set the stirrer below the liquid.

SOURCE: Induchem AG: Formula 14.2

Shampoo with Unispheres YE-501**Raw Materials:**

	Wt%
A 1 Water	52.30
2 Propylene Glycol	0.75
3 Uniphen P-23	0.25
4 Disodium EDTA	0.10
5 Unicide U-13	0.40
6 Acrylates/C10-30 Alkyl Acrylate Crosspolymer	1.00
B 7 Sodium Laureth Sulfate	40.00
8 Uniphen P-23	0.50
9 Fragrance	0.40
C 10 Sodium Hydroxide	3.50
11 FD&C Blue No. (C.I. 42090)	0.20
D 12 Unispheres YE-501 Yellow	0.60

Procedure:

Manufacturing is best performed in a closed apparatus (as eg. Fryma, Krieger) provided with vacuum and a speed-regulated stirrer with rotor-stator homogenizer. The microbiological quality of the demineralized water must be checked carefully.

1. Dissolve 3 and 4 in 1 and 2 at 100C. Let cool down to 40C and dissolve 5. Disperse 6 with a propeller stirrer at high speed. Continue stirring at reduced speed for 30 minutes, then homogenize intensively for 3 minutes and let cool overnight.
2. Dissolve separately 8 and 9 in 7. Prevent foam building (see note below).
3. At reduced stirrer speed suck B from below into A and mix further 15 minutes, then homogenize for additional 3 minutes at medium intensity.
4. Add 10 and 11, mix 10 minutes, then homogenize 3 minutes at low speed.
5. Add 12 at low stirrer speed as long until a homogeneous distribution is obtained.

NOTE:

If manufacturing equipment is not provided with vacuum, set the stirrer below the liquid level to prevent foaming.

SOURCE: Induchem AG: Formula 14.1

Shower-Shampoo Gel

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Sodium Lauryl Sulfate (30%)	20
Alpha Olefin Sulfonate (40%)/Sodium C14-16 Olefin Sulfonate	10
Schercotaine CAB-G (35%)/Cocamidopropyl Betaine	10
Schercamox CAA-G (35%)/Cocamidopropylamine Oxide	13
Schercoquat IAS-LC (90%)/Isostearamidopropyl Ethyl Dimonium Ethosulfate	1
Color, Fragrance, Preservative	q.s.
Water (deionized)	q.s. to 100

Procedure:

1. Heat water to 50C. With stirring add Schercoquat IAS-LC to dissolve.
2. Add Schercotaine CAB-G.
3. Add Schercamox CAA-G.
4. Slowly add Alpha Olefin Sulfonate, viscosity builds slightly.
5. Increase stirring and slowly add Sodium Lauryl Sulfate. Mix thoroughly at high rpm until uniform.
6. To clear up bubble formation heat finished product in an oven (at 45-50C) overnight.

Typical Specifications:

Activity: 19%
 Viscosity @ 25C: 16,000 cps (without fragrance)
 pH @ 25C: 6.8

Formulation SK 148

Clear Super-Conditioning Shampoo

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water	55.3
Schercoquat IIS-LC/Isostearyl Ethyl Imidonium Ethosulfate	0.5
Katemul IGU-70/Isostearamidopropyl Dimethylamino Gluconate	2.0
Sodium Lauryl Sulfate	33.0
Schercomid AME-70/Acetamide MEA	5.0
Schercomid SCO-EX/Cocamide DEA	4.0
Perfume	q.s.
Preservative	0.2

Procedure:

1. Dissolve Schercoquat IIS-LC in 60C water. Add Schercomid AME-70 and Katemul IGU-70.
2. Add while mixing, Sodium Lauryl Sulfate and Schercomid SCO-EX.
3. Mix until uniform.
4. At 35-40C add preservative.
5. When cool, add fragrance.

Formulation SK 143

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Shower Shampoo Liquid

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Sodium Lauryl Sulfate (30%)	15
Sodium Lauryl Ether Sulfate (30%)/Sodium Laureth (3) Sulfate	5
Alpha Olefin Sulfonate (40%)/Sodium C14-16 Olefin Sulfonate	10
Schercopol OMES-Na (35%)/Disodium Oleamido PEG-2 Sulfo-succinate	10
Schercotaine CAB-G (35%)/Cocamidopropyl Betaine	10
Schercamox CAA-G (35%)/Cocamidopropylamine Oxide	3
Schercoquat IAS-LC (90%)/Isostearamidopropyl Ethyl Dimonium Ethosulfate	1
Color, fragrance, preservative	0.1
Water (deionized)	q.s. to 100

Procedure:

1. Heat water to 50C. With stirring add Schercoquat IAS-LC to dissolve.
2. Add Schercotaine CAB-G.
3. Add Schercamox CAA-G and Schercopol OMES-Na.
4. Slowly add Alpha Olefin Sulfonate, viscosity builds slightly.
5. Increase stirring and slowly add Sodium Laureth and Sodium Lauryl Sulfate. Mix thoroughly at high rpm until uniform.
6. To clear up bubble formation heat finished product in an oven (at 45-50C) overnight.

Typical Specifications:

Activity: 19%
 Viscosity @ 25C: 9,000 cps (without fragrance)
 pH @ 25C: 6.8

Clear Conditioning Shampoo

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Water	64.5
Schercoquat IIS-LC/Isostearyl Ethyl Imidonium Ethosulfate	0.5
Ammonium Lauryl Sulfate 28%	30.0
Schercomid SCO-EX/Cocamide DEA	5.0

Procedure:

1. Dissolve Schercoquat IIS-LC in 60C water.
 2. Add while mixing, Ammonium Lauryl Sulfate and Schercomid SCO-EX.
 3. Mix until uniform.
- Formula SK 90

SOURCE: Scher Chemicals, Inc.: Formulary

Stripper Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Dodecylbenzene Sulfonic Acid	21.5
Caustic Soda (50%)	5.4
Sodium Laureth Sulfate (60%)	4.0
Mackam 35 (Cocamidopropyl Betaine)	5.5
Sodium Xylene Sulfonate (40%)	8.0
Paragon (Propylene Glycol (and) DMDM Hydantoin (and) Methylparaben)	qs
Water, Dye, Fragrance	qs to 100.0

Solids, %: 30(+/-1.0)

pH: 6.5-7.0

Viscosity (cps, 25C): 250-350

Cloud Point: 5C

Procedure:

1. Add Caustic Soda to water.
2. Adjust pH to 7.0-8.0 with Dodecylbenzene Sulfonic Acid.
3. Add remaining components and adjust pH to 6.5-7.0 with Citric Acid.
4. If necessary, lower viscosity with Sodium Xylene Sulfonate or raise viscosity with Sodium Chloride.

Sting Free 2:1 Shampoo

<u>Raw Materials:</u>	<u>Wt%</u>
Mackam 2C (Disodium Cocoamphodiacetate)	35.0
Sodium Laureth-1 Sulfate	20.0
Mackanate DC-30 (Disodium Dimethicone Copolyol Sulfosuccinate)	4.0
Mackernium 007 (Polyquaternium 007)	3.0
Mackester SP (Glycol Stearate (and) Stearamide MEA)	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Procedure:

1. Add Mackam 2C, Sodium Laureth-1 Sulfate, Mackanate DC-30 and Mackester SP to water.
2. Heat to 70C and blend until homogeneous.
3. Slowly add Mackernium 007.
4. Cool to 50C and add Mackstat DM.
5. Add Dye and Fragrance.
6. Adjust pH to 7.0-7.5 with Citric Acid.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

3 in 1 Antidandruff Shampoo
17.2% active ingredient

Recipe:		Wt%
A Octopirox/Piroctone Olamine		0.40
B Water		10.00
C Genapol LRO liquid/Sodium Laureth Sulfate		30.00
Hostapon KCG/Sodium Cocoyl Glutamate		5.00
Genamin KSL/PEG-5 Stearyl Ammonium Lactate		2.00
Cetiol HE/PEG-7 Glyceryl Cocoate		1.00
Belsil DMC 6032/Dimethicone Copolyol Acetate		2.00
Merquat 550/Polyquaternium-7		5.00
Fragrance		0.30
D Water		30.30
E Glucamate DOE 120/PEG-120 Methyl Glucose Dioleate		1.00
F Genagen CAB/Cocamidopropyl Betaine		8.00
Genapol L-3/Laureth-3		2.00
Genapol TSM/PEG-3 Distearate, Sodium Laureth Sulfate		3.00

Procedure:

1. Mix A with B.
2. Add the components of C to 1 and stir well.
3. Dissolve E in D, add to 1 and stir well.
4. Stir the components of F one after another into 1.
5. Adjust the pH to 6.0

SOURCE: Hoechst Aktiengesellschaft: Formula B I/6142

Section IX

Shaving Products

After Shave Balm

A soothing water-in-oil lotion containing Bentone Gel EUG rheological additive

<u>Ingredients:</u>	<u>Wt%</u>
Sorbitan Isostearate	2.50
Glycerine BP	3.00
Magnesium Sulphate	0.70
Caprylic/Capric Triglyceride	4.00
Octyldodecanol	4.00
Beeswax BP	0.50
Bisabolol	0.20
D-Panthenol	0.50
Cetearyl Octanoate, Isopropyl Myristate	5.00
2-Phenoxyethanol, Methyl dibromoglutaronitrile, 2-Bromo-2-Nitropropane-1,3-Diol, Butyl 4-Hydroxy- benzoate, Isobutyl 4-Hydroxybenzoate	0.20
Perfume	0.20
Bentone Gel EUG	3.00
Demineralized Water	Bal to 100%

Method of Manufacture:

1. Thoroughly disperse the Bentone Gel EUG in the oil phase and heat to 75-80C.
2. In a separate vessel, heat 98% of the water with the Glycerine and the Magnesium Sulphate to 75-80C.
3. Add the water phase to the oil phase steadily mixing with a propeller stirrer on medium speed.
4. Dissolve the D-Panthenol in the remaining 2% of the water.
5. Add the D-Panthenol premix below 50C to the cooling emulsion.
6. Transfer to a high shear stirrer for around 10 minutes and continue to cool.
7. At 30C add the perfume and preservative.

The balance of richness and light, easy-to-spread characteristics provided by Bentone Gel EUG additive makes this After Shave Balm pleasant on the skin. This formulation is designed to be soothing and combat irritation on freshly shaved skin through the action of the Bisabolol.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formulas

After Shave Balsam

<u>Recipe:</u>	<u>Wt%</u>
A Hostaphat KML/Laureth-4 Phosphate, Polyglyceryl-2 Sesquiosostearate	1.50
Hostacerin DGSEB/Polyglyceryl-2 PEG-4 Stearate	2.50
Isopropyl palmitate	2.00
Isopropyl isostearate	3.00
Abil 100/Dimethicone	1.00
Menthol	0.10
Camphor	0.10
B Carbopol 980/Carbomer	0.30
C Caustic soda solution (10%)	1.75
Allantoin	0.30
PEG 400/PEG-8	3.00
Milfoil extract	2.00
Water	82.15
Preservative	q.s.
Dyestuff solution	q.s.
D Fragrance	0.30
1. Melt A at approx. 60C, then add B.	
2. Heat C to approx. 60C.	
3. Stir 2 into 1 and stir until cool.	
4. At approx. 35C add D to 3.	
5. Finally homogenize the emulsion.	
Formula A VI/1151	

Shaving Cream

<u>Recipe:</u>	<u>Wt%</u>
A Stearic acid	10.20
Myristic acid	5.10
Coconut fatty acid	5.80
B Water	46.20
Potassium hydroxide	6.80
Sodium hydroxide	0.35
Triethanolamine	0.95
PEG 400/PEG-8	5.40
C Stearic acid	10.20
Myristic acid	5.10
D Genapol LRO paste/Sodium Laureth Sulfate	2.70
E Menthol	0.20
Fragrance	1.00

Procedure:

1. Melt A at ca. 90C.
2. Heat the solution of B to ca. 90C.
3. Stir 2 into 1, continue stirring at 70-80C for ca. 30 minutes.
4. Melt C at ca. 90C.
5. Stir 4 into 3.
6. Carefully stir 5 until cool (avoid foam formation).
7. Stir D into 6 at ca. 50C, and at ca. 40C add solution E.
8. Homogenize at room temperature and homogenize again one day later.

Note: The loss of water is approx. 10%.

Formula A III/1003

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

After Shave Lotion

An after shave balm which uses SF1632 to add moisture due to its ability to reduce water loss from the skin (TEWL). SF1202, cyclopentasiloxane, is used to provide a quick dry which does not sting or cool the skin.

<u>Ingredient/Function:</u>	<u>Wt%</u>
Part A:	
Deionized Water/Diluent	59.61
Disodium EDTA/Chelating agent	0.02
SD Alcohol-40/Astringent	15.00
Phenoxyethanol (and) Methylparaben (and) Ethylparaben (and) Propylparaben (and) Butylparaben(1)/Preservative	0.60
Sorbital 70%/Humectant	3.00
Part B:	
Cyclopentasiloxane(SF1202) (2)/Emollient/Quick dry	5.00
Cetearyl Methicone(SF1632)(2)/Occlusive/TEWL reduction/Emollient	8.00
Bisabolol/Reduces irritation and redness	0.20
Tocopheryl Acetate/Vitamin E/Antioxidant	0.20
Coco-Caprylate/Caprates/Emollient	0.80
Aluminum Starch Octenylsuccinate/Slip/Feel/Viscosity	5.00
Polysorbate-85/Preservative	1.50
Part C:	
Fragrance(3)	1.00
D&C Green No. 5(0.1% solution)/Color	0.07

Procedure:

1. Combine Part A at room temperature and mix for 15 minutes with moderate propeller agitation.
2. Combine Part B and mix with moderate propeller agitation for 20 minutes until uniform.
3. Add Part B to Part A SLOWLY with moderate stirring. Continue mixing for 15 minutes.
4. Add Part C to Part AB and mix with moderate propeller agitation for 20 minutes.

Trade Names/Suppliers:

- (1) Phenonip, Nipa Laboratories, Inc.
- (2) GE Silicones
- (3) Shaw-Mudge

SOURCE: GE Silicones: Personal Care Formulary: Formula SP 114

Clear Shaving Gel

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Deionized Water	46.5
Glucamate DOE-120/PEG 120 Methyl Glucose Dioleate	3.0
Sodium Laureth Sulfate	25.0
Schercotaine SCAB-G/Cocamidopropyl Hydroxy Sultaine	20.0
Schercomid AME-70/Acetamide MEA	2.0
Phytoderm Complex G/Propylene Glycol (and) Licorice Extract	1.0
Dow Corning 193 Surfactant/Dimethicone Copolyol	2.5
Preservative	q.s.
Fragrance	q.s.

Procedure:

Dissolve DOE-120 in water with gentle heat to 60-65C. Add the rest of the ingredients one by one, mixing well after each addition.

Formulation SK 89

Cooling After Shave
Oil Free/Alcohol Free

<u>Ingredients/CTFA Name:</u>	<u>Wt%</u>
Deionized Water	86.9
Carbopol 941 3% Aq. Sln.	5.0
Dow Corning 193 Surfactant/Dimethicone Copolyol	1.0
Schercomid AME-70/Acetamide MEA	1.0
Schercemol GMIS/Glyceryl Isostearate	4.0
Herbasol Extract Cucumber/Cucumber Extract	1.0
Herbasol Extract Chamomile/Chamomile Extract	1.0
Preservatives	q.s.
Triethanolamine (99.0%)	0.1
Fragrance	q.s.

Procedure:

Disperse Carbopol in water until uniform. Add the rest of the ingredients one by one, mixing well after each addition.

Formulation SK 88

SOURCE: Scher Chemicals, Inc.: Suggested Formulation

Moisturizing After Shave Treatment (Eashave)

Eashave in this pleasant light after shave cream has moisturizing properties and calms the skin after shaving.

<u>Item:</u>	<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
1	A) Emulgade SE	6.00
2	Lanette O/Cetearyl Alcohol	1.00
3	Cetiol V/Dicaprylyl Ether	8.00
4	Eutanol G/Octyldodecanol	4.00
5	B) Deionized Water	69.20
6	Glycerin	3.00
7	Phenonip	0.50
8	Carbopol Ultrez 10/Carbomer	0.30
9	C) Triethanolamine	
10	D) Bisabolol	0.20
11	Ethyl Alcohol 96%	3.00
12	Eashave	4.00
13	Fragrance/Courage 0/243101	0.80

Procedure:

Heat the ingredients of fatty phase A) to 80C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then adjust the pH with phase C) to 5.7.

Finally incorporate items of phase D) one after the other and stir cold.

Application No.: I 006.0/11.97

Refreshing After Shave (Eashave)

This alcohol containing, clear after shave formulation refreshes the face and leaves a decent touch of perfume on the skin. Eashave combats the negative effects of the alcohol (e.g. "burning" feeling and washing out of skin lipids).

<u>Item:</u>	<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
1	A) Irgasan DP 300/Triclosan	0.01
2	Crodamol DA/Diisopropyl Adipate	1.00
3	Ethyl Alcohol 96%	50.00
4	B) Propylene Glycol	2.00
5	Deionized Water	41.49
6	C) Fragrance/Courage 0/243101	0.50
7	D) Eashave	5.00

Procedure:

Dissolve phase A). Mix phase B).

Slowly add phase B) to phase A). Then add item 6.

Finally add item 7.

Application No.: I 001.D/05.96

SOURCE: Pentapharm Ltd.: Suggested Formulations

Soft After Shave Balm (Eashave)

This white, elegant balm contains 20% alcohol and gives a fresh feeling on the face. Eashave reduces irritation and strengthens the lipid barrier of the skin after shaving. The balm has soothing and moisturizing properties.

Item: Ingredients/INCI Name:

	Wt%
1 A) Deionized Water	69.70
2 Allantoin	0.10
3 Carbopol 941/Carbomer 941	0.40
4 B) PCL Solid/Stearyl Heptanoate, Stearyl Caprylate	2.00
5 Bisabolol	0.20
6 Cremophor RH40/PEG-40 Hydrogenated Castor Oil	0.30
7 C) Ethyl Alcohol 96%	20.00
8 Menthol	0.10
9 Fragrance/Aras 0/221807	1.50
10 D) Eashave	5.00
11 Triethanolamine	0.70

Procedure:

Dissolve items 2+3 in water (1) and heat to 60C.

Heat the ingredients of phase B) to 60C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to room temperature.

Then add phase C). Finally incorporate item 10 and neutralize with item 11.

Application No. I 004.0/0.5.96

Mild After Shave Balm (Eashave)

This white, alcohol free balm is designed especially for men with sensitive skin. Eashave reduces the irritation from shaving and gives the skin a soft feeling.

Item: Ingredients/INCI Name:

	Wt%
1 A) Deionized Water	75.80
2 Glycerin	10.00
3 Phenoxyethanol	0.50
4 Allantoin	0.10
5 Imidazolidinyl Urea	0.20
6 Carbopol 980/Carbomer 980	0.20
7 B) Crodamol EHO/Oleyl Oleate	3.00
8 Glucamate SSE 20/PEG-20 Methyl Glucose	3.00
9 Glucate SS/Methyl Glucose Sesquistearate	1.00
10 C) Triethanolamine	0.20
11 D) Eashave	5.00
12 Fragrance/DRN-20/232146	1.00

Procedure:

Dissolve items 2-6 in water (1) and heat to 60C.

Heat the ingredients of fatty phase B) to 60C.

Under stirring add phase B) to phase A), homogenize and cool to room temperature.

Neutralize with item 10. Finally add items 11 and 12 one after the other.

Application No. I 005.0/05.96

SOURCE: Pantapharm Ltd.: Suggested Formulations

Section X

Soaps and Hand Cleaners

Antibacterial Handwash

A premium liquid cleansing system that leaves a long lasting soft and smooth after-feel.

<u>Ingredients:</u>	<u>Wt%</u>
Water	44.3
Ammonium Lauryl Sulfate(28%)	23.0
Sodium Laureth-2 Sulfate(26%)	21.5
Promidium CO	3.5
Monateric LMAB	3.0
Phospholipid CDM	2.5
Pricerine 9083	1.0
Triclosan	0.2
Monamate RMEA-40	0.7
Disodium EDTA	0.2
Cutric Acid	0.1

Procedure:

With stirring, combine all ingredients except Triclosan. Heat mixture to 55C and add Triclosan. While cooling, add color and fragrance. Adjust the pH to 6 with citric acid.

Typical Properties:

Appearance: Clear Liquid

Solids(%): 18

Viscosity (cP) @ 25C: 5400

Formula F-858

Clear Antibacterial Hand Wash

<u>Ingredients:</u>	<u>Wt%</u>
Part 1:	
Ethanol(95%)	63.0
Hydroxyethyl Cellulose	1.0
Part 2:	
Propylene Glycol	5.0
Phospholipid CDM	3.0
Part 3:	
Water	28.0

Procedure:

Blend hydroxyethyl cellulose and ethanol with high speed agitation. Separately, mix Phospholipid CDM, propylene glycol and water. Add part 1 to part 2. Mix until uniform. Add water, color and fragrance. Package.

Typical Properties:

Appearance: Clear colorless liquid

pH: 6.0

Formula F-853

SOURCE: Mona Industries, Inc.: Formulas F-858 and F-853

Clear Liquid Hand Soap with Suspended Mineral Oil Beads

<u>Ingredient:</u>	<u>Wt%</u>
DI Water	68.00
Carbopol ETD 2020	0.90
Glycerin	2.00
Triethanolamine	0.20
Ammonium lauryl sulfate (30%)	20.00
Lauryl ether sulfosuccinate (40%)	2.00
Disodium EDTA	0.10
Propylene glycol	2.00
Triclosan	0.50
DMDM hydantoin	0.70
Triethanolamine	0.60
Cocamidopropyl betaine (35%)	2.00
Mineral oil beads	1.00

Physical Properties:

Brookfield RVT Viscosity-20 rpm: 5,000 cP

Product pH: 5.0-6.0

Product Clarity/Appearance: Clear

Procedure:

1. Using moderate agitation (800 rpm) provided by a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations, disperse or screen the Carbopol polymer into the DI water. Mix the slurry for approximately 15 minutes or until the slurry is homogeneous. Heating the water to 40-50C will increase the wetting and dispersability of the Carbopol ETD polymers.
2. With minimal agitation to avoid excessive air entrapment, add in the glycerin, TEA, lauryl sulfate, sulfosuccinate, and the EDTA.
3. Premix the propylene glycol and the triclosan. Add the mixture.
4. Continue agitation and add the DMDM hydantoin followed by the triethanolamine and the cocamidopropyl betaine surfactant. Add the mineral oil beads with reduced agitation to avoid breaking the beads.
5. Add color and fragrance, as desired.

SOURCE: BFGoodrich Co.: Formulation HIT-410

d-Limonene Hand Soap

Starting formulation for a hand soap containing d-Limonene as a grease cutter.

<u>Ingredients:</u>	<u>Wt%</u>
Phase A:	
Water, DI	77.40
Carbopol 1382	1.00
Triethanolamine 99%	1.50
Phase B:	
Sulfochem ES-2	5.10
Phase C:	
d-Limonene	15.00

Blending Procedure:

Charge water and begin vigorous agitation. Add the Carbopol 1382 and mix. After adequate mixing, add the TEA-99 (Note: This will form a thick gel.) To this, add the Sulfochem ES-2 and mix until homogeneous. Add the d-Limonene. Adjust the pH up with TEA and down with citric.

Formulation No. F1027

d-Limonene Hand Soap

Starting formulation for a hand soap containing d-Limonene as a grease cutter.

<u>Ingredients:</u>	<u>Wt%</u>
Phase A:	
Water, DI	73.40
Carbopol 1382	1.00
Triethanolamine 99%	1.50
Phase B:	
Sulfochem ES-2	5.10
Amidex O	2.00
Neodol 91-8	2.00
Phase C:	
d-Limonene	15.00

Blending Procedure:

Charge water and begin vigorous agitation. Add the Carbopol 1382 and mix. After adequate mixing, add the TEA-99. (Note: This will form a thick gel.) To this, add the Sulfochem ES-2, Amidex O, and the Neodol 91-8, and mix until homogenous. Add the d-Limonene. Adjust the pH up with TEA and down with citric.

Formulation No. F1028

SOURCE: Chemron Corp.: Suggested Formulations

d-Limonene Waterless Hand Cleaner**Ingredient:**

	<u>Wt%</u>
DI water	69.85
Carbopol ETD 2001	0.35
d-Limonene	25.00
Propylene glycol	1.00
Glycerin	2.00
C12-15 linear alcohol, 7 moles EO	0.50
Germaben IIE	1.00
Sodium hydroxide (18%)	0.30
Pumice*	10.00

Physical Properties:

Brookfield RVT Viscosity, 20 rpm: 35,000 cP

*addition of pumice may increase viscosity

Product pH: 5.5-5.8

Product Clarity/Appearance: Thick, white, creamy emulsion

Procedure:

1. Using moderate agitation (800 rpm) provided by a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations, disperse or screen the Carbopol polymer into the DI water. Mix the slurry for approximately 15 minutes or until the slurry is homogeneous. Heating the water to 40-50C will increase the wetting and dispersability of the Carbopol ETD polymers.
2. Using moderate agitation, add the d-Limonene to the polymer dispersion and mix for 10 minutes.
3. Premix the propylene glycol, glycerin, alcohol ethoxylate and preservative together. Add to the solvent/water mixture.
4. Add the sodium hydroxide to the formulation-check the pH frequently-until pH 5.8 is achieved. For best results, keep pH under 6.0.
5. Add the pumice, or other abrasive, as desired.
6. Add color and fragrance, as desired.

SOURCE: BFGoodrich Co.: Formulation HIT-400

d-Limonene Waterless Hand Cleaner

<u>Ingredient:</u>	<u>Wt%</u>
d-Limonene	25.00
Pemulen TR-1	0.20
Deionized water	70.10
Propylene glycol	1.00
Glycerin	2.00
C12-15 linear alcohol, 7 moles EO	0.50
Germaben IIE	1.00
Sodium hydroxide (18%)	0.20
Pumice	10.00

Physical Properties:

Brookfield RVT Viscosity 20 rpm: 11,400 cP
 Product pH: 5.8
 Product Clarity/Appearance: Opaque

d-Limonene Waterless Hand Cleaner

<u>Ingredient:</u>	<u>Wt%</u>
d-Limonene	25.00
Pemulen TR-2	0.20
Deionized water	70.10
Propylene glycol	1.00
Glycerin	2.00
C12-15 linear alcohol, 7 moles EO	0.50
Germaben IIE	1.00
Sodium hydroxide (18%)	0.20
Pumice	10.00

Physical Properties:

Brookfield RVT Viscosity 20 rpm: 6,500 cP
 Product pH: 5.8
 Product Clarity/Appearance: Opaque

Procedure:

1. Use a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations. Add the Pemulen polymer into the vortex of the rapidly agitating d-limonene (800 rpm). Allow to mix until homogeneous and free of polymer lumps.
2. Using moderate agitation, add the deionized water to the oil phase and mix for 10 minutes.
3. Premix the propylene glycol, glycerin, alcohol ethoxylate and preservative together. Add to the solvent/water mixture.
4. Add the sodium hydroxide to the formulation-check the pH frequently-until pH 5.8 is achieved. For best results keep pH under 6.0.
5. Add the pumice, or other abrasive, as desired.
6. Add color and fragrance, as desired.

SOURCE: BFGoodrich Co.: Formulation HIT-401

Emollient Liquid Soap (With Conditioner)Ingredients/CTFA Name:

	Wt%
Deionized Water	49.00
Schercoquat DAS/Quaternium-61	3.00
Schercotaine CAB-G/Cocamidopropyl Betaine	10.00
Schercopol DOS-70/Dioctyl Sodium Sulfosuccinate	15.00
Rhodacal A246/L/Sodium C14-16 Olefin Sulfonate	16.50
Schercomid AME-70/Acetamide MEA	3.00
Glycerine	1.50
Schercemol DISD/Diisostearyl Dilinoleate	1.00
Germaben II	1.00

Procedure:

Dissolve Schercoquat DAS in water at room temperature (or with gentle heat to 40C). Add the rest of the ingredients one by one, mixing well after each addition.

Formula SK 134

Liquid Hand Soap
(Pearlescent)Ingredients/CTFA Name:

	Wt%
Water (Deionized)	51.8
Dowicil-200/Quaternium-15	0.2
Schercoquat IAS (90%)/Isostearamidopropyl Ethyldimonium Ethosulfate)	1.0
Schercotaine CAB-G (45%)/Cocamidopropyl Betaine	10.0
Schercomid SLM-LC/Lauramide DEA	1.0
Ethylene Glycol Monostearate/Glycol Stearate	1.0
Stepanol WA Paste (30%)/Sodium Lauryl Sulfate	35.0
Fragrance	q.s.

Procedure:

1. Heat water to 45-50C. With stirring add Dowicil-200 and Schercoquat IAS. Mix to dissolve.
2. Add Schercotaine CAB-G.
3. Dissolve (melt) EGMS in Schercomid SLM-LC, then add to above.
4. Add Stepanol WA Paste.
5. When uniform, cool and add fragrance.

Specifications:

Activity, %: 18

Viscosity @ 25C*: 4,000-6,000 cps

pH @ 25C: 8.0

*To increase viscosity, decrease % amide.

*To decrease viscosity, increase % amide.

Formula SO-021

SOURCE: Scher Chemicals, Inc.: Suggested Formulations

Hand Sanitizing Gel

<u>Ingredient:</u>	<u>Wt%</u>
DI water	38.75
Carbopol ETD 2001	0.20
Propylene glycol	0.50
Ethanol	60.00
PEG-60 almond glycerides	0.30
Triisopropanolamine	0.25

Physical Properties:

Brookfield RVT Viscosity-20 rpm: 7,000 cp
 % Transmission 420nm: 95-97
 (Brinkman Colorimeter)
 pH range: 7.3-7.6

Hand Sanitizing Gel

<u>Ingredient:</u>	<u>Wt%</u>
DI Water	38.65
Carbopol Ultrez 10	0.30
Propylene glycol	0.50
Ethanol	60.00
PEG-60 almond glycerides	0.30
Triisopropanolamine	0.25

Physical Properties:

Brookfield RVT Viscosity-20 rpm: 11,000 cp
 % Transmission 420nm: 92-94
 (Brinkman Colorimeter)
 pH range: 7.3-7.6

Procedure:

1. Using moderate agitation (800 rpm) provided by a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations, disperse or screen the Carbopol polymer into the DI water. Mix the slurry for approximately 15 minutes or until the slurry is homogeneous. Heating the water to 40-50C will increase the wetting and dispersability of the Carbopol ETD polymers.
2. Slowly add the ethanol with gentle mixing. Allow as much air to escape as possible before proceeding.
3. Add the PEG-60 almond glycerides with gentle mixing.
4. Add the triisopropanolamine with gentle sweeping motion to minimize air entrapment. Mix until uniform.
5. Add dye or fragrance if desired.

SOURCE: BFGoodrich Co.: Formulation HIT-420

Hand Sanitizing Gel (Continued)

<u>Ingredient:</u>	<u>Wt%</u>
DI water	38.55
Carbopol ETD-2020	0.40
Propylene glycol	0.50
Ethanol	60.00
PEG-60 almond glycerides	0.30
Triisopropanolamine	0.25

Physical Properties:

Brookfield RVT Viscosity-20 rpm: 7,000 cp

% Transmission 420 nm: 96-98

(Brinkman Colorimeter)

pH range: 7.3-7.6

Procedure:

1. Using moderate agitation (800 rpm) provided by a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations, disperse or screen the Carbopol polymer into the DI water. Mix the slurry for approximately 15 minutes or until the slurry is homogeneous. Heating the water to 40-50C will increase the wetting and dispersability of the Carbopol ETD polymers.
2. Slowly add the ethanol with gentle mixing. Allow as much air to escape as possible before proceeding.
3. Add the PEG-60 almond glycerides with gentle mixing.
4. Add the triisopropanolamine with gentle sweeping motion to minimize air entrapment. Mix until uniform.
5. Add dye or fragrance if desired.

SOURCE: BFGoodrich Co.: Formulation HIT-420

Liquid Hand Soap

Starting formulation for a mild hand soap.

Ingredients:

	<u>Wt%</u>
Sulfochem B-209	28.00
Water, soft	70.81
Fragrance	0.10
NaCl	typical: 1.00
Citric acid	typical: 0.09
Preservatives	q.s.

Blending Procedure:

Charge water into mixing vessel and add remaining ingredients in order listed. Mix until homogeneous.

Typical Physical Properties:

Viscosity: 5,000-7,000 cps

pH: 7.0-7.5

Formulation No. E3128

Liquid Hand Soap

Starting formulation for a mild hand soap

Ingredients:

	<u>Wt%</u>
Sulfochem B-2090P	29.00
Water, soft	70.04
Fragrance	0.15
NaCl	typical: 0.75
Citric acid	typical: 0.06
Preservatives	q.s.

Blending Procedure:

Charge water into mixing vessel and add remaining ingredients in order listed. Mix until homogeneous.

Typical Physical Properties:

Viscosity: 5,000-7,500 cps

pH: 7.0-7.5

Formulation No. E3133

SOURCE: Chemron Corp.: Suggested Formulations

Liquid Soap

with a pearl-lustre effect, 14.6% active ingredient

Recipe:

	Wt%
A Hostapon SCID/Sodium Cocoyl Isethionate	4.00
B Water	53.90
C Genapol ZRO liquid/Sodium Laureth Sulfate	30.00
Fragrance	0.30
Genapol PGL/Glycol Distearate, Cocamide MEA,	
PPG-4 Deceth-4	4.00
Dyestuff solution	q.s.
Preservative	q.s.
Genagen CAB/Cocamidopropyl Betaine	6.00
D Sodium chloride	1.80

Procedure:

1. Dissolve A in B at approx. 60C.
2. Cool 1 to approx. 35C.
3. Stir the components of C one after another into 2.
4. If necessary adjust the pH.
5. Finally adjust the viscosity with D.

Formula A II/1033

Liquid Soap

clear, 9.6% active ingredient

Recipe:

	Wt%
A Genapol LRO liquid/Sodium Laureth Sulfate	20.00
B Hostapur SAS 60/Sodium C14-17 Sec Alkyl Sulfonate	5.00
Genagen CA-050/PEG-5 Cocamide	1.00
Fragrance	0.30
Water	72.60
Dyestuff solution	q.s.
Preservative	q.s.
C Tylose H 100000 yp/Hydroxyethyl Cellulose	1.10

Procedure:

1. Stir the components of B one after another into A.
2. Add C to 1 while stirring continuously until a homogeneous product free of lumps has been obtained.

Formula A II/1019

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Mild Hand Cleanser

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate LO-Special (Disodium Lauryl Sulfosuccinate)	83.0
Mackamide PKM (Palmkernelamide MEA)	4.0
Mackernium 007 (Polyquaternium 7)	0.8
Mackstat DM (DMDM Hydantoin)	qs
Water, Fragrance	qs to 100.0

Procedure:

1. Add Mackamide PKM to Mackanate LO-Special.
2. Heat to 70C.
3. Blend until homogeneous.
4. Dissolve Mackernium 007 in water and add to product.
5. Blend until completely homogeneous.
6. Cool to 50C with mild agitation.
7. Add Mackstat DM and Fragrance.
8. Cool with continuous agitation.

Facial Cleanser

<u>Raw Materials:</u>	<u>Wt%</u>
Mackanate LO-Special (Disodium Lauryl Sulfosuccinate)	88.0
Cetyl Alcohol	2.0
Brij 52	2.0
Mackstat DM (DMDM Hydantoin)	qs
Water, Dye, Fragrance	qs to 100.0

Solids, %: 40.0 (+-1.0)

pH (as is): 5.5-6.0

Appearance: Pearly Cream

Procedure:

1. Add Cetyl Alcohol, Brij 52, and water to Mackanate LO-Special.
2. Heat to 70C.
3. Blend until homogeneous.
4. Adjust pH to 5.0-6.0 with Sodium Hydroxide.
5. Cool to 50C and add Mackstat DM and Fragrance.
6. Adjust solids to 40.0 (+-1.0)% at this point.
7. Cool to room temperature.

SOURCE: McIntyre Group Ltd.: Personal Care Formulary: Formulas

Mineral Spirits Waterless Hand Cleaner**Ingredient:**

	Wt%
DI water	64.90
Carbopol ETD 2001	0.30
Mineral Spirits	30.00
Propylene glycol	1.00
Glycerin	2.00
C12-15 linear alcohol, 7 moles EO	0.50
Germaben IIE	1.00
Sodium hydroxide (18%)	0.30
Pumice*	10.00

Physical Properties:

Brookfield RVT Viscosity, 20 rpm: 45,000 cP

*addition of pumice may increase viscosity

Product pH: 5.5-5.8

Product Clarity/Appearance: Thick, white, creamy emulsion

Procedure:

1. Using moderate agitation (800 rpm) provided by a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations, disperse or screen the Carbopol polymer into the DI water. Mix the slurry for approximately 15 minutes or until the slurry is homogeneous. Heating the water to 40-50C will increase the wetting and dispersability of the Carbopol ETD polymers.
2. Using moderate agitation, add the mineral spirits to the polymer dispersion and mix for 10 minutes.
3. Premix the propylene glycol, glycerin, alcohol ethoxylate and preservative together. Add to the solvent/water mixture.
4. Add the sodium hydroxide to the formulation-check the pH frequently-until pH 5.8 is achieved. For best results keep pH under 6.0.
5. Add the pumice, or other abrasive, as desired.
6. Mix color and fragrance, as desired.

SOURCE: BFGoodrich Co.: Formulation HIT-402

Mineral Spirits Waterless Hand Cleaner

<u>Ingredient:</u>	<u>Wt%</u>
Mineral Spirits	25.00
Pemulen TR-1	0.20
Deionized water	70.10
Propylene glycol	1.00
Glycerin	2.00
C12-15 linear alcohol, 7 moles EO	0.50
Germaben IIE	1.00
Sodium hydroxide (18%)	0.20
Pumice	10.00

Physical Properties:

Brookfield RVT Viscosity-20 rpm: 11,500 cP
 Product pH: 5.8
 Product Clarity/Appearance: Opaque

Mineral Spirits Waterless Hand Cleaner

<u>Ingredient:</u>	<u>Wt%</u>
Mineral Spirits	25.00
Pemulen TR-2	0.20
Deionized water	70.10
Propylene glycol	1.00
Glycerin	2.00
C12-15 linear alcohol, 7 moles EO	0.50
Germaben IIE	1.00
Sodium hydroxide (18%)	0.20
Pumice	10.00

Physical Properties:

Brookfield RVT Viscosity-20 rpm: 7,200 cP
 Product pH: 5.8
 Product Clarity/Appearance: Opaque

Procedure:

1. Use a Lightnin' Mixer or similar variable speed unit and an impeller suitable for general mixing and blending operations. Add the Pemulen polymer into the vortex of the rapidly agitating mineral spirits (800 rpm). Allow to mix until homogeneous and free of polymer lumps.
 2. Using moderate agitation, add the deionized water to the oil phase and mix for 10 minutes.
 3. Premix the propylene glycol, glycerin, alcohol ethoxylate and preservative together. Add to the solvent/water mixture.
 4. Add the sodium hydroxide to the formulation-check the pH frequently-until pH 5.8 is achieved. For best results keep pH under 6.0.
 5. Add the pumice, or other abrasive, as desired.
 6. Add color and fragrance, as desired.
- SOURCE: BFGoodrich Co.: Formulation HIT-403

Section XI

Sun Care Products

After Sun Gel

This non tacky, smooth clear gel contains the combination of super moisturizers, and humectants (Aloe Vera Gel, Liponic EG-1, Unimoist U-125 and Hyaluronic Acid) to counteract the drying effects of the sun. It is suitable for all skin types, including sensitive.

<u>Sequence:</u>	<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
1	Deionized Water	40.12
1	Aloe Vera Gel	4.00
1	Uniphen P-23	0.30
2	Liponic EG-1/Glycereth-26	2.00
2	Hypan SA-100H/Acrylic Acid/Acrylonitrogens Copolymer	0.15
3	Deionized Water	1.00
3	Triethanolamine, 99%	0.23
4	Carbopol ETD 2001/Carbomer (2% sol'n)	22.50
5	Deionized Water	1.00
5	Triethanolamine, 99%	0.45
6	Lubrajel MS	20.00
6	Unimoist U-125	1.50
7	Gorgonian Extract BG*	0.50
8	Deionized Water	1.00
8	Unicide U-13/Imidazolidinyl Urea	0.25
9	Hyaluronic Acid (1% sol'n)	5.00
*Patent #4,849,410 (and) 4,745,104		

Procedure:

1. Combine Sequence #1 ingredients and heat to 80C while mixing on overhead mixer at medium/high speed with propeller blade at bottom of vessel to avoid aeration of batch.
2. Mix Sequence #2 ingredients into a slurry and add to Sequence #1 with medium/high mixing while holding batch temperature at 80C.
3. Premix Sequence #3 and add to batch at 80C on overhead mixer at medium/high speed for approximately 15-20 minutes or until Hypan is completely hydrated and clear (without fish eyes).
4. Heat Sequence #4 to 60C and add to batch while mixing at medium/high speed. Hold temperature at 75C.
5. Premix Sequence #5 and add to batch at medium/high speed. Continue mixing while holding temperature at 75C until mixture is completely into solution and clear (5-15 minutes). Cool batch to 60C after completely into solution.
6. Add Sequence #6 to batch at medium speed. Cool to 40C.
7. At 40C add Sequence #7 to batch with low speed mixing using propeller blade. Lower temperature to 35C.
8. Premix Sequence #8 and add to batch held at 35C mixing with overhead mixer at low speed. Cool to room temperature.
9. At room temperature, add Sequence #9 to batch.

Specifications:

pH: 5.9+-0.2

Viscosity: 367,000 cps+-10% T-E @ 0.6 rpm

SOURCE: Lipo Chemicals Inc.: Formula No. 935

After Sun Lotion

A smooth, soothing lotion for use after sun-bathing to restore moisture, and to add natural oils to the skin, whilst reducing the erythema caused by very excessive UV exposure. The inclusion of Lipex Canola-U brings natural antioxidants and anti-inflammatory components to the UV-stressed skin. Akogel has a slightly cooling effect and helps to soften and smooth the skin to prevent dryness and flaking.

<u>Raw Material/INCI Name:</u>	<u>Wt%</u>
A. Arlatone 985/Polyoxyethylene stearyl stearate	4.0
Brij 721/Steareth-21	2.0
Jarcol I-20/Octyldodecanol	6.0
Akogel/Hydrogenated vegetable oil	6.0
Lipex Canola-U/Canola oil unsaponifiables	4.0
B. Atlas G-2330/Sorbeth-30	2.5
Water	75.0
Phenonip/Esters of p-hydroxybenzoic acid	0.45
C. Perfume	0.05

Procedure:

1. Heat the phases A and B to 75C.
2. Add the oily phase A to the water phase B whilst stirring thoroughly.
3. Cool down to 55C, homogenize.
4. Cool down to 35C, add C.
5. Cool down to room temperature whilst stirring.

Rheological Characteristics:

Viscosity after one week at 20C (Bohlin Rheometer VOR):
 10 Pas at shear rate of 1.0 s⁻¹
 1.1 Pas at shear rate of 30.0 s⁻¹

SOURCE: Jarchem Industries, Inc.: Suggested Formulation

After Sun Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 840 (Propylene Glycol Dicaprylate/Dicaprate)	10
Imwitor 380 (Glyceryl Cocoate/Citrate/Lactate)	5
Imwitor 900 (Glyceryl monostearate)	3
Imwitor 928 (Glyceryl Cocoate)	3
Propylene glycol monostearate	1
Plurol Stearique (Polyglyceryl-6 Distearate)	1
B. D-Panthenol	2
Allantoin	0.3
Keltrol F (Xanthane)	0.5
Preservative	q.s.
Water ad	100
C. Vitamin E	0.5
Fragrance	q.s.

Preparation:

A is mixed together and heated up to 75-80C. B is stirred homogeneously and brought to the same temperature. B is emulsified into A. Subsequently emulsion is stirred cold down to about 30C and then C is added.

Sun Protection Cream, SPF 6

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan Gel	10
Mineral oil	12
Imwitor 780K (Isostearyl Diglyceryl Succinate)	4
Softigen 701 (Glyceryl Ricinoleate)	4
Paraffin	4
Neo Heliopan E1000 (Isopropyl Methoxycinnamate (and) Ethyl-Diisopropylcinnamate)	4
Elfacos ST 9 (PEG-45 Dodecyl Glycol Copolymer)	1
B. Magnesium Sulphate	1
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is put together and heated up to approx. 75C. B is brought to the same temperature. Then A is homogenized and B emulsified into A. Then the mixture is stirred cold to 30C and after that C is added.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

After Sun Lotion (Iricalmin)

This modern after sun lotion with Iricalmin regenerates the protective lipid layer of the skin and has anti-irritant activity. In addition Iricalmin has moisturizing properties. The alcohol in the formulation gives an agreeable cooling effect.

Ingredients/INCI Name:

	<u>Wt%</u>
A) Tego Care 450/Polyglyceryl-3 Methylglucose Distearate	1.50
Lanette O/Cetearyl Alcohol	1.15
Cutina GMS V/Glyceryl Stearate	1.15
Cetiol 868/Octyl Stearate	8.00
Fitoderm/Squalane	5.00
Bisabolol/Bisabolol	0.20
Wacker-Belsil CM 040/Cyclomethicone	2.00
B) Deionized Water	65.10
Keltrol/Xanthan Gum	0.10
C) Glycerin/Glycerin	5.00
Phenonip	0.50
Iricalmin/Water, Wheat (Tritium Vulgare) Germ Extract, Saccharomyces Cerevisiae Extract, Sodium Hyaluronate	5.00
D) Ethyl Alcohol 96%/Alcohol	5.00
Fragrance/Rivalia 0/221212	0.30

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold. Finally incorporate phase D).

SOURCE: Pentapharm Ltd.: Application No. C 029.0/05.99

After Sun Soother with Aloe Vera

A refreshing creamy lotion which soothes, cools and moisturizes sun-dried skin.

Ingredients:

	<u>Wt%</u>
A. Water	86.23
Phospholipid SV	3.0
Propylene Glycol	2.0
B. Monafax MAP 160	1.0
Cetyl Alcohol	2.0
Hexyl Laurate	1.0
Monasil PCA	2.0
C. AMP (95%)	0.35
D. Titanium Dioxide	0.4
E. Aloe Vera Gel 1:1	2.0

Procedure:

Combine Part A while heating to 70C. Separately, mix Part B while heating to 70C. Add Part B to Part A slowly with rapid agitation. Add Part C. Add Part D, homogenize, cool to 50C. Add aloe vera, color, fragrance and preservative. Package.

Typical Properties:

Appearance: White flowable lotion

Viscosity: 23,400 cP

pH: 6.1

Formula F-836

Sunscreen Stick

The following formulation produces a waterproof sunscreen stick which has a SPF factor of approximately 10-20.

Ingredients:

	<u>Wt%</u>
Monalac ML (Refined Milk Lipid)	75.0
Ozokerite #1	15.0
Octyl Methoxycinnamate	7.0
Benzophenone-3	3.0
Fragrance	q.s.

Procedure:

Blend the Monalac ML and Ozokerite #1 together at 65-75C. Avoid air entrainment. When uniform, add other ingredients one at a time and continue blending until clear. Reduce heat, add fragrance, antioxidant (optional) and preservative and pour at 50-60C into package. A rich, smooth, protective and non-greasy skin covering will be provided.

Formula F-835

SOURCE: Mona Industries, Inc.: Formulas F-836 and F-835

Daily UV Protection Lotion

Chemical sunscreens and titanium dioxide provide moderate UV protection in this lotion. Petrolatum adds moisturizing properties, yet the lotion is not greasy and has a dry afterfeel.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Octyl Dimethyl PABA/Escalol 507	4.00
Glyceryl Stearate (and) PEG-100 Stearate/Arlacel 165	3.50
Benzophenone-3/Escalol 567	3.00
Titanium Dioxide (and) Mineral Oil (and) Caprylic/ Capric Triglyceride/Tioveil MOTG	3.00
Petrolatum/Snow Petrolatum	2.00
Polysorbate 20/T-Maz 20	2.00
Lauryl Lactate/Ceraphyl 31	2.00
Cetyl Alcohol	1.00
Cyclomethicone/DC 344 Fluid	1.00
B: Deionized Water	74.65
Propylene Glycol	2.50
Carbomer/Carbopol Ultrez 10	0.20
C: Triethanolamine	0.15
D: Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben/Germaben II-E	1.00
Fragrance	q.s.

Stir the part B ingredients together and heat to 75C. Heat part A to 80C with gentle mixing until all the solids have dissolved. Add part A to B with stirring. Continue mixing while allowing the mixture to cool. After 30 minutes, add part C. Let this mixture slowly cool with continued stirring. At 40C, add part D. Continue mixing to 30C.

Waterproof Natural Sunblock

Approx. SPF 15

This rich, waterproof sunblock cream is extremely light and goes on smoothly. It rubs in quickly without whitening and leaves a dry afterfeel. Mineral oil adds moisturization and enhances the cream's lightness.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Deionized Water	71.90
Carbomer/Carbopol 2984	0.20
B: Titanium Dioxide (and) Isopropyl Myristate/ Tioveil IPM	12.50
Mineral Oil/Drakeol 7	3.00
Myristyl Myristate/Ceraphyl 424	2.70
Cetyl Alcohol	2.70
Glyceryl Stearate (and) PEG-100 Stearate/Arlacel 165	2.00
Tricontanyl PVP/Ganex WP-660	2.00
Oleth-20/Volpo 20	1.20
C: Sodium Hydroxide (10% solution)	0.80
D: Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben/Germaben II-E	1.00
Fragrance	q.s.

Disperse the carbomer in rapidly stirred deionized water. Heat to 75C. Heat part B to 80C with gentle mixing until all the organic solids have dissolved. Add part B to A with stirring. After 5 minutes, add part C and continue mixing while allowing the mixture to cool. At 40C, add part D. Continue stirring to 30C

SOURCE: Penreco: Formulas 597-109-B & 597-110

Moisturizing Sunscreen

Emollients in this rich sunscreen help to leave the skin feeling soft, smooth, and moisturized

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Octyl Methoxycinnamate/Escalol 557	7.50
Octyl Salicylate/Uvinul O-18	5.00
Benzophenone-3/Escalol 567	3.00
Mineral Oil/Drakeol 7	2.50
Stearic Acid	2.00
Cetearyl Alcohol (and) Polysorbate 60/Lipowax P	1.50
Hexyl Laurate/Cetiol A	1.00
Butyl Myristate/Bumyr	1.00
Cetyl Palmitate	1.00
Glyceryl Stearate (and) PEG-100 Stearate/Arlacel 165	0.50
B: Deionized Water	66.00
Butylene Glycol	1.50
Carbomer/Carbopol ETD 2001	0.25
Tetrasodium EDTA/Hamp-Ene 220	0.05
C: Triethanolamine	0.60
D: Propylene Glycol (and) Diazolidinyl Urea (and)	
Methylparaben (and) Propylparaben/Germaben II	1.00
Fragrance	0.20

Procedure:

Disperse the Carbopol in rapidly agitated DI water. Add the remaining part B ingredients and heat to 80C with stirring. Heat part A to 80C with gentle mixing until all the solids have dissolved. Add part A to B with stirring and continue mixing while allowing the mixture to cool. After stirring for 20 minutes, add part C. Let the mixture cool with continued stirring. At 40C, add part D. Continue mixing to 30C.

SOURCE: Penreco: Formula 597-105

Natural Everyday Sunblock

This light, smooth cream has nice emolliency and spreads easily. It incorporates both titanium dioxide and zinc oxide as the natural sunblocks.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Deionized Water	55.50
Propylene Glycol	2.50
Water (and) Titanium Dioxide/Tioveil AQ-G	10.00
B: Zinc Oxide (and) Isopropyl Myristate/Spectraveil IPM	10.00
Mineral Oil/Drakeol 7	7.00
Cyclomethicone/DC 344 Fluid	2.50
Apricot Kernel Oil	2.50
Steareth-21/Brij 721S	2.50
Glyceryl Stearate/Cerasynt GMS	2.00
PPG-15 Stearyl Ether/Arlamol E	2.00
Cetyl Alcohol/Lanette 16	1.50
Isocetyl Alcohol/Eutanol G-16	1.00
C: Propylene Glycol (and) Diazolidinyl Urea (and) Methylparaben (and) Propylparaben/Germaben II-E	1.00
Fragrance	q.s.

Procedure:

Mix the part A ingredients and heat to 70-75C with stirring. Heat part B (except for the Spectraveil) to 75-80C with gentle stirring until all the solids have dissolved. Add the Spectraveil to part B, mix well, then add part B to A with stirring. Continue stirring while allowing the mixture to cool. Add part C at 40C. Continue mixing to 30C.

Sunscreen Gelee

This light, smooth anhydrous gelee contains mineral oil and other emollients which help moisturize the skin while exposed to the sun.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
Mineral Oil/Drakeol 7	55.00
Polyethylene/Epolene N-21	9.75
Isopropyl Palmitate	9.00
Octyl Methoxycinnamate/Escalol 557	7.00
Super Petrolatum	5.25
Kukui Nut Oil	4.00
Maleated Soybean Oil/Ceraphyl GA-D	3.00
Cetearyl Alcohol (and) Ceteareth-20/Lipowax D	3.00
Macadamia Nut Oil	2.00
Peanut Oil	1.00
Dimethicone/DC 200 Fluid 2 cSt	0.95
BHT	0.05
Fragrance	q.s.

Procedure:

Heat all ingredients except fragrance to 75-80C with stirring until homogeneous. Allow the mixture to cool and add fragrance just before solidification occurs. Continue gentle mixing during cooling to give a creamy, light gel. Package at 30C.

SOURCE: Penreco: Suggested Formulations

O/W-Sun Screen Milk
Manufacturing at room temperature

Recipe:

	<u>Wt%</u>
A Hostaphat KL 340 N/Trilaureth-4 Phosphate	3.00
Mineral oil, high viscosity	10.00
Isopropyl palmitate	5.00
B Neo-Heliopan E 1000/Isoamyl p-Methoxycinnamate	8.50
Neo-Heliopan BB/Benzophenone-3	1.50
C Carbopol 980/Carbomer	0.50
D Glycerin	3.00
Caustic soda solution (10%)	2.00
Water	66.20
Preservative	q.s.
E Fragrance	0.30

Procedure:

1. Add solution B to A, then add C.
2. Stir D into 1, then add E.
3. Homogenize the emulsion.

Formula A VI/7007

O/W-Sun Blocker

Recipe:

	<u>Wt%</u>
A Hostacerin DGL/Polyglyceryl-2 PEG-10 Laurate	1.00
Hostacerin DGSB/Polyglyceryl-2 PEG-4 Stearate	4.00
Mineral oil, low viscosity	10.00
Isopropyl palmitate	5.00
Eusolex 6300/4-Methylbenzylidene Camphor	5.00
D-Panthenol	0.50
B PNC 400/Sodium Carbomer	1.30
C Eusolex 232/Phenylbenzimidazole Sulfonic Acid	5.00
D Tris(hydroxymethyl)-aminomethane	2.21
Water	65.69
Preservative	q.s.
E Fragrance	0.30

Procedure:

1. Melt A at approx. 70C, then add B.
2. Dissolve C in D at approx. 70C.
3. Stir 2 into 1 and stir until cool.
4. At approx. 35C add E to 3.
5. Homogenize the emulsion.

Formula A VI/7204

SOURCE: Hoechst Aktiengesellschaft: Guide Recipes

Physical Sunscreen Body Lotion

This sunscreen lotion provides a light, soft, smooth and non-tacky feel for daily use. This unique after-feel results from SFE839 elastomer dispersion, SF1642 silicone alkyl copolymer and SF1528 silicone emulsifier. All three ingredients are both functional ingredients and aesthetic ingredients. SF1528 silicone emulsifier gives a stable water in oil emulsion where SFE839 elastomer dispersion and SF1642 silicone alkyl copolymer act as thickening agents. In addition, SFE839 elastomer dispersion is a detackifier and gives substantivity to the formulation.

Ingredient/Function:**Wt%****Part A:**

Cyclopentasiloxane (and) Dimethicone Copolyol(SF1528)	
(1)/Emulsifier	10.0
Cyclopentasiloxane(SF1202)(1)/Emollient	16.0
Cyclopentasiloxane (and) Dimethicone/Vinyl Dimethicone	
Crosspolymer(SFE839)(1)/Emollient, Thickener	3.0
Sorbitan Oleate/Emulsifier	0.5

Part B:

Titanium Dioxide (2)/Physical Sunscreen	5.0
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Part C:

C30-45 Alkyl Dimethicone(SF1642)(1)/Thickener	1.0
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Part D:

Butylene Glycol/Humectant	2.0
NaCl/Stabilizer	0.5
Quaternium-15/Preservative	0.1
Water/Diluent	61.9

Procedure:

1. Combine SF1528, SFE839, SF1202 and mix until uniform, then add Sorbitan Oleate.
2. Slowly add TiO₂ to Oil Phase. Mix until uniform.
3. Heat the batch to 65C.
4. Melt SF1642 and add to 3.
5. Separately mix together water, butylene glycol, NaCl, and preservative.
6. Slowly add water phase to oil phase and continue mixing for 30 min.
7. Homogenize and package.

Trade Names/Suppliers:

- (1) GE Silicones
- (2) UV-Titan X161, Presperse Inc.

SOURCE: GE Silicones: Personal Care Formulary: Formula SC107

Self Tanning Cream for Bright Skin (Erythrulose)

The emulsifying system of this cream is of high-quality vegetable origin. Erythrulose and Dihydroxyacetone give an even, long lasting and naturally looking tan. The UV-filters protect the skin from photodamage and consequent premature aging.

Ingredients/INCI Name:

	<u>Wt%</u>
A) Emulgade PL68/50/Cetearyl Glucoside, Cetearyl Alcohol	2.50
Lanette O/Cetearyl Alcohol	2.50
Miglyol 812/Caprylic/Capric Triglyceride	8.00
Cetiol 868/Octyl Stearate	4.00
Abil-350/Dimethicone	0.50
Parsol MCX/Octyl Methoxycinnamate	2.00
Parsol 1789/Butyl Methoxydibenzoylmethane	1.00
B) Deionized Water	63.60
Keltrol/Xanthan Gum	0.10
C) Glycerin/Glycerin	5.00
Phenonip	0.50
D) Deionized Water	5.00
Erythrulose/Erythrulose	3.50
Dihydroxyacetone/Dihydroxyacetone	1.50
E) Fragrance/Rivalia 0/221212	0.30

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold. Finally incorporate phases D) and E) one after the other and adjust the pH to 4.5.

SOURCE: Pentapharm Ltd.: Application No. A 057.0/05.99

Self Tanning Body Lotion (Erythrulose/Phytaluronate)

Erythrulose and Dihydroxyacetone in this body lotion is the ideal combination for a natural, uniform and long lasting tan. Phytaluronate adds moisture to the skin and in combination with glycerin combats the drying out.

<u>Ingredients/INCI Name:</u>	<u>Wt%</u>
A) Emulgade PL68/50/Cetearyl Glucoside, Cetearyl Alcohol	1.50
Lanette O/Cetearyl Alcohol	1.50
Miglyol 812/Caprylic/Capric Triglyceride	8.00
Cetiol 868/Octyl Stearate	4.00
Abil-350/Dimethicone	0.50
B) Deionized Water	66.60
Keltrol/Xanthan Gum	0.10
Phytaluronate/Locust Bean (Ceratonia Siliqua) Gum	3.00
C) Glycerin/Glycerin	5.00
Phenonip	0.50
D) Deionized Water	5.00
Erythrulose/Erythrulose	3.00
Dihydroxyacetone/Dihydroxyacetone	1.00
E) Fragrance/Rivalia 0/221212	0.30

Procedure:

Heat the ingredients of fatty phase A) to 70C.

Heat the ingredients of water phase B) to 75C.

Under stirring add phase B) to phase A), cool to 50C, homogenize and cool to 30C.

Then add phase C) and stir cold. Finally incorporate phases D) and E) one after the other and adjust the pH to 4.5.

SOURCE: Pentapharm Ltd.: Application No. C 030.0/05.99

Self Tanning Lotion

An oil-in-water Self Tanning Lotion containing Bentone Gel TN and Bentone LT rheological additives.

<u>Ingredients:</u>	<u>Wt%</u>
Glyceryl Stearate, PEG-100 Stearate	4.0
Caprylic/Capric Triglyceride	5.0
Propylene Glycol	4.0
Cetearyl Alcohol	1.2
Dihydroxy Acetone	5.0
C12-15 Alkyl Benzoate	4.0
Bentone Gel TN	2.5
Bentone LT (3% dispersion)	8.0
Methyl Paraben	0.1
Propyl Paraben	0.1
Citric Acid	qs to pH 4
Demineralized Water	bal to 100%

Bentone LT dispersion:

Bentone LT	3.0
Deionized Water	97.0

Method of Manufacture:

1. Prepare a dispersion of the Bentone LT in water. (see below)
2. Disperse the two preservatives in 90% of the water, add the Propylene Glycol and the Bentone LT premix.
3. Heat to 75-80C.
4. Mix the liquid oil and the ester, and thoroughly disperse the Bentone Gel TN in the mixture. Add the Cetearyl Alcohol and emulsifier to the mix.
5. Heat to 75-80C.
6. Add the two phases together with high-shear stirring.
7. At 50C, transfer to a propeller stirrer and continue to cool.
8. Mix the Dihydroxyacetone with the remaining 10% of the water.
9. At 40C add the DHA premix.
10. At 25C check the pH and adjust if necessary with Citric Acid to pH 4.

Preparation of Bentone LT Dispersion:

1. Prepare a 3% dispersion of Bentone LT additive in deionized water using a rotor-stator or similar high-shear mixer (e.g. Silverson).
Start the mixer in the water, steadily add the Bentone LT to the vortex and stir until completely dispersed. (15-20 mins).
2. Allow the premix to stand to let any entrapped air escape.

The Dihydroxy Acetone has a pH of about 4.0 and therefore present a problem for many aqueous thickeners. Bentone LT additive, however, provides stable viscosity build. Additionally, the even distribution and spreadability of the lotion together with its silky residual feel are imparted by the Bentone TN additive.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Self Tanning Milk (O/W)

Raw Materials:	Wt%
A Emulsifier E 2155 (Stearyl Alcohol (and) Steareth-7 (and) Steareth-10)	2.00
Teginacid H (Glyceryl Stearate (and) Ceteth-20)	2.00
Luvitol EHO (Cetearyl Octanoate)	10.00
Imwitor 900 (Glyceryl Stearate)	3.00
Cetiol (Oleyl Oleate)	5.00
Lunacera M (Microwax)	1.00
Miglyol 812 neutral oil (Caprylic/Capric Triglyceride)	3.00
B Propanediol-1,2 (Art. No. 107478) (Propylene Glycol)	4.00
Preservatives	q.s.
Water, demineralized	ad 100.00
C Dihydroxyacetone (Art. No. 110150)	5.00
Water, demineralized	10.00

Procedure:

Heat phase A to 75C, phase B to 80C. Add phase B slowly to phase A while stirring. Homogenize. Cool down while stirring and add phase C at 40C.

Note:

pH24C=3.6

Viscosity 15,000 mPas (Brookfield RVT, Sp. C, 10 rpm) at 24C

Samples contain as preservatives:

0.05% Propyl-4-hydroxybenzoate (Merck Art. No. 107427)

0.15% Methyl-4-hydroxybenzoate (Merck Art. No. 106757)

SOURCE: Rona-Merck: Formulation 03-07/K

Leave-On Hair Treatment Spray with Sunscreen

A light hair and scalp treatment containing Lipamide MEAA and Lipoquat R for conditioning and shine, with Unitrienol T-27 for oil control. The Unipabol U-17 helps protect the hair from UV induced color damage.

Sequence:	Raw Material/INCI Name:	Wt%
1	Liponic EG-1/Glycereth-26	3.00
1	Lipamide MEAA/Acetamide MEA	3.50
1	Lipoquat R/Ricinoleamidopropyl Ethyldimonium Ethosulfate	0.50
2	Deionized Water	3.00
2	Unipabol U-17/PEG-25 PABA	7.50
3	SD Alcohol 40-B (190 proof)	73.50
4	Unitrienol T-27/Farnesyl Acetate (and) Farnesol (and) Panthenyl Triacetate	2.00
4	Lipovol J/Jojoba (Buxus Chinensis) Oil	1.00
4	Liponate NPGC-2/Neopentyl Glycol Dicaprylate/Dicaprate	6.00

Procedure:

1. Premix Sequence #1 ingredients at ambient temperature on overhead mixer at low/medium speed.
2. Premix Sequence #2 and add to Sequence #1 at low/medium speed.
3. Add combined Sequence #1 and Sequence #2 to Sequence #3 on overhead mixer at medium/low speed.
4. Add premixed Sequence #4 to batch at medium speed until solution is clear and homogeneous.

SOURCE: Lipo Chemicals Inc.: Formulation No. 1005

Solar Protection with Cherry Pit Oil

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	AEC Cherry Pit Oil	7.500
2	AEC Hydroxyoctacosanyl Hydroxystearate	5.000
3	AEC Methoxy PEG 22 Dodecylglycol Copolymer	2.000
4	AEC PEG 45 Dodecylglycol Copolymer	4.000
5	Tioveil TG	12.500
6	Cocoa Butter, Refined	5.000
7	AEC Diisostearyl Trimethylolpropane Siloxy Silicate	3.000
8	AEC Dimethicone V100	2.000
Aqueous Phase:		
9	Water; Pure	53.250
10	Propylene Glycol USP	5.000
11	Preservative as required	0.400
Cooling Cycle:		
12	Fragrance; Cherry AG6328	0.350

Mixing Instructions:

NOTE: The Aqueous is added to the Oil Phase. The product is a w/o emulsion and is water resistant. Weigh the items of the Oil Phase into a jacketed vessel and heat to 80/85C with stirring, ensure the Tioveil TG is fully dispersed before slowly adding the Aqueous Phase while vigorously mixing. Once addition is complete the emulsion is cooled with slow speed stirring, the perfume added and the product given a final high shear mix.

IN-VITRO TEST RESULTS: SPF: 14.5/MAR: 0.64

Formula Ref.: 749*

Broad Spectrum Protection Cream

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Spectraveil TG 40% Dispersion	18.000
2	Cetearyl Octanoate	3.000
3	AEC Dimethicone V100	1.000
4	Beeswax; White Pellets	3.500
Aqueous Phase:		
5	Water; Pure	62.700
6	Xanthan Gum	0.200
7	Veegum Regular	1.000
8	Arlatone 2121	5.500
9	Sodium Lactate 60%	0.300
10	Tioveil AQ N	4.000
11	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
12	Fragrance	0.300

Mixing Instructions:

This is an o/w emulsion, the two phases are heated separately to 75C and the Oil Phase added slowly to the Aqueous with high shear mixing. Once addition is complete the emulsion is cooled with slow speed stirring and given a final high shear mix when cold.

Formula Ref.: 528*

SOURCE: A&E Connock Ltd.: Suggested Formulations

Solar Protection Cream

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	AEC Dimethicone V100	2.000
2	AEC Hydroxyoctacosanyl Hydroxystearate	5.000
3	AEC Methoxy PEG 22 Dodecylglycol Copolymer	2.000
4	AEC PEG 45 Dodecylglycol Copolymer	4.000
5	Tioveil FIN	12.500
6	Cocoa Butter, Refined	3.000
7	Octyl Palmitate	5.000
8	AEC Diisostearyl Trimethylolpropane Siloxy Silicate	7.500
Aqueous Phase:		
9	Water; Pure	53.350
10	Preservative as required	0.400
11	Propylene Glycol USP	5.000
Cooling Cycle:		
12	Fragrance	0.250

Mixing Instructions:

NOTE: The Aqueous is added to the Oil Phase. The product is a w/o emulsion and is water resistant. Weigh the items of the Oil Phase into a jacketed vessel and heat to 80/85C with stirring, ensure the Tioveil TG is fully dispersed before slowly adding the Aqueous Phase while vigorously mixing. Once addition is complete the emulsion is cooled with slow speed stirring, the perfume added and the product given a final high shear mix. Formula Ref.: 780*2

Solar Protection Lotion

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	AEC Diisostearyl Trimethylolpropane Siloxy Silicate	5.000
2	AEC Dimethicone V100	1.500
3	Amphisol K	0.500
4	Tioveil FIN	12.500
5	AEC Hydroxyoctacosanyl Hydroxystearate	3.500
6	AEC Sorbitan Palmitate	3.500
Aqueous Phase:		
7	Water; Pure	68.050
8	Xanthan Gum	0.200
9	Veegum Ultra	0.800
10	AEC Polysorbate 20	3.500
11	Sodium Lactate 60%	0.300
12	Preservative as required	0.400
Cooling Cycle:		
13	Fragrance	0.250

Mixing Instructions:

This is an o/w emulsion, the two phases are heated separately to 75C and the Oil Phase added slowly to the Aqueous with high shear mixing. Once addition is complete the emulsion is cooled with slow speed stirring and given a final high shear mix when cold.

Formula Ref.: 781*2

SOURCE: A&E Connock Ltd.: Suggested Formulations

Soothing After Sun Lotion

This emollient lotion contains actives to soothe sunburned skin.
Petrolatum helps moisturize dry skin exposed to the sun.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Deionized Water	78.10
Aloe Vera Gel/Activera 104	2.00
Glycerin	1.00
Acrylates/Octylacrylamide Copolymer/Dermacryl LT	1.00
Triethanolamine	1.00
Carbomer/Carbopol 941	0.20
Methylparaben	0.20
Tetrasodium EDTA/Hamp-Ene 220	0.05
B: Dioctyl Malate/Ceraphyl 45	3.50
PEG-7 Glyceryl Cocoate/Cetiol HE	3.30
Petrolatum/Snow Petrolatum	2.50
Glyceryl Stearate/Cerasynt GMS	2.00
PEG-40 Stearate/Myrj 52-S	1.00
Shea Butter Unsaponifiables (and) Decosahexanoic Acid (and) Eicosapentaenoic Acid (and) Tocopheryl Acetate (and) Corn Oil Unsaponifiables/Destressine 2000	1.00
Retinyl Palmitate/Vitamin A Palmitate	0.50
Propylparaben	0.15
C: Imidazolidinyl Urea/Germall 115	0.30
Fragrance	0.20

Procedure:

Disperse the Carbopol and Dermacryl in rapidly agitated DI water. Add the triethanolamine and heat to 75C with stirring. Add the remaining part A ingredients and continue stirring and heating to 75C. Heat part B to 80C with gentle mixing until all the solids have dissolved. Add part B to A with stirring and continue mixing while allowing the mixture to cool. At 40C, add part C. Continue gentle stirring to 30C.

SOURCE: Penreco: Formula 597-107

Sunblock with TiO₂**Formula A:**

<u>Raw Material/CTFA Name:</u>	<u>Wt%</u>
Schercemol DID/Diisopropyl Dimer Dilinoleate	10.0
Schercemol CO/Cetyl Octanoate	1.5
Arlacel 60/Sorbitan Stearate	3.0
Schercemol GMIS/Glyceryl Isostearate	1.0
Dow Corning 193/Dimethicone Copolyol	1.0
Tioveil TG/Titanium Dioxide (and) Caprylic Capric Triglyceride	12.5
Promulgen D/Cetearyl Alcohol (and) Ceteareth-20	1.0
Dow Corning 556 Fluid/Phenyl Trimethicone	1.5

Formula B:

<u>Raw Material/CTFA Name:</u>	<u>Wt%</u>
Deionized Water	52.7
Veegum 4% Aq. Soln./Magnesium Aluminum Silicate	10.0
Keltrol F/Xanthan Gum	0.3
Propylene Glycol	2.0
Tween 60/Polysorbate 60	3.0
Preservative	q.s.

Procedure:

Heat both phases to 70C. Add water phase to oil phase with thorough agitation. Cool to room temperature. Homogenize briefly.

SOURCE: Scher Chemicals, Inc.: Formula SK 85

Sun Care SPF 15
PABA Free, Oil Free

<u>Ingredients/CTFA Name:</u>		<u>Wt%</u>
A-A1	Schercemol CO/Cetyl Octanoate	10.00
	Schercemol DISD/Diisostearyl Dimer Dilinoleate	1.00
	Schercemol TISC/Triisostearyl Citrate	5.00
	Silicone fl. 350 cps	0.20
	Cetyl Alcohol	1.50
	Schercemol GMIS/Glyceryl Isostearate	4.00
	Amphisol/Cetyl Phosphate (and) DEA Cetyl Phosphate	2.50
A2	Parsol MCX/Octyl Methoxycinnamate	7.50
	Dipsal/Dipropylene Glycol Salicylate	5.00
B-B1	Deionized Water	48.40
	Carbopol 940 2% Aq. Soln.	10.00
B2	Glycerin	3.00
B3	Triethanolamine	0.20
C-	Germaben II	1.00
D-	Aloe Vera Extract	0.50
E-	Fragrance	0.20

Procedure:**Phase B:**

In the main beaker, disperse B1 together at 75-85C.

Add Glycerin.

Add Triethanolamine to neutralize the Carbopol gel.

Mix until a smooth gel is obtained.

Phase A:

Blend Phase A1 at 85C.

Once completely clear add A2.

Blend Phase A together until a homogeneous oil phase is obtained.

Add Phase A to Phase B with continuous mixing at 80-85C for fifteen minutes.

Cool batch to 60C with continuous mixing then add Phase C.

Continue to cool batch to 30C, then add Phase D and Phase E in sequence

Continue to cool batch with mixing to 25-28C

SOURCE: Scher Chemicals, Inc.: Formulation SK 144

Sun Lotion with TiO₂**Raw Materials:****Parts By Weight****Part I:**

Water	560.0
Carbomer 934 (1)	2.0

Part II:

Rosswax 2540 (2)	10.0
GMS SE (3)	4.0
Dow Corning 344 (4)	4.0
Jojoba Oil (5)	4.0
Escalol 507 (6)	32.0
Arlacel C (7)	3.0

Part III:

TiO ₂ Sperse BG (8)	20.0
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Part IV:

Fragrance (9)	q.s.
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Part V:

Germaben II (10)	6.0
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Part VI:

Triethanolamine (11)	4.0
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Procedure:

Heat the water in Part I to 140F with agitation and slowly add the Carbomer 934 til mixed. In a separate heated vessel heat all the ingredients in Part II to 140F with agitation. Next add Part II to Part I mixing thoroughly while maintaining 140F. Now add Part III, then Part IV, then Part V and finally add Part VI slowly. Continue to maintain good agitation. Cool to 130F and package.

Suppliers:

- (1) B.F. Goodrich
- (2) Frank B. Ross Co., Inc.
- (3) Stepan Chemical
- (4) Dow Corning
- (5) Arista Industries
- (6) ISP Van Dyk
- (7) ICI Surfactants
- (8) Collaborative Labs
- (9) Novarome
- (10) ISP Sutton Labs
- (11) Mutchler Chemical

SOURCE: Frank B. Ross Co., Inc.: Suggested Formulation

Sun Protection Cream (W/O)SPF 22 (Sun Protection Factor, Colipa Method with 5 Volunteers)Raw Materials:

	<u>Wt%</u>
A: Eusolex OCR (Art. No. 1.05377) (Octocrylene)	3.00
Eusolex 9020 (Art. No. 1.05844) (Butyl Methoxydi-benzoylmethane)	1.50
Elfacos E 200 (Methoxy PEG-22/Dodecyl Glycol Copolymer)	1.00
Elfacos ST 9 (PEG-45/Dodecyl Glycol Copolymer)	3.00
Elfacos C 26 (Hydroxyoctacosanyl Hydroxystearate)	5.00
Paraffin Oil Liquid (Art. No. 1.07162) (Mineral Oil)	8.00
Isopropyl Stearate	9.00
DL- α -Tocopherol acetate (Art. No. 5.00952) (Tocopheryl Acetate)	0.50
B: Eusoflex 232 (Art. No. 1.05372) (Phenylbezimidazole Sulfonic Acid)	2.00
Tris(hydroxymethyl)-aminomethane (Art. No. 1.08386) (Tromethamine)	0.89
Tritiplex III (Art. No. 1.08421) (Disodium EDTA)	0.10
Allantoin (Art. No. 1.01015)	0.10
Glycerine (Art. No. 1.04093)	3.00
Preservatives	q.s.
Water, demineralized	ad 100.00

Procedure:

To neutralize Eusolex 232 dissolve Tris(hydroxymethyl)-aminomethane in the water of phase B and add Eusolex 232 while stirring. When uniform add the remaining ingredients of phase B and heat to 80C. Heat phase A to 75C. Add phase B slowly to phase A while stirring. Homogenize and cool down while stirring.

Notes:

Viscosity 41,000 mPas (Brookfield RVT, Sp. C, 5 rpm) at 24C
 Samples contain as preservatives:
 0.050% Propyl-4-hydroxybenzoate (Merck Art. No. 107427)
 0.150% Methyl-4-hydroxybenzoate (Merck Art. No. 106757)

SOURCE: Rona-Merck: Formulation 04-02/K

Sun Protection Gel (aqueous)
SPF 10 (Sun Protection Factor, FDA-Method with 5 Volunteers)

<u>Raw Materials:</u>		<u>Wt%</u>
A	Eusolex 232 (Art. No. 105372) (Phenylbenzimidazole Sulfonic Acid)	4.00
	Tris-(hydroxymethyl)-aminomethane (Art. No. 108386) (Tromethamine)	1.77
	Allantoin (Art. No. 101015)	0.20
	Sorbitol F liquid (Art. No. 102993)	5.00
	Preservatives	q.s.
	Water, demineralized	ad 100.00
B	Perfume 72979	0.30
	Arlatone 980 (PEG-35-Hydrogenated Castor Oil)	1.00
C	Carbomer 940	1.50
	Water, demineralized	36.10
D	Tris(hydroxymethyl)-aminomethane (Art. No. 108386) (Tromethamine)	2.40
	Water, demineralized	10.00

Procedure:

To neutralize Eusolex 232 dissolve Tris(hydroxymethyl)-aminomethane in the water of phase A and add Eusolex 232 while stirring. When uniform add the remaining ingredients of Phase A. Heat to 70C until homogeneous and cool while stirring. Blend ingredients of phase B. Disperse Carbomer 940 in the water of phase C and homogenize. Dissolve the Tris(hydroxymethyl)-aminomethane in the water of phase D. Combine phases C and D and homogenize. Incorporate phases A and B. Homogenize again.

Note:

Transparent gel
 Viscosity 35,000 mPas (Brookfield RVT, Sp. C, 5 rpm) at 25C
 pH22C=6.7
 Samples contain as preservatives:
 0.20% Methyl-4-hydroxybenzoate (Merck-Art.-No. 6757)

SOURCE: Rona-Merck: Formulation 32-02/E

Sun Protection Lotion (O/W)SPF 23 (Sun Protection Factor, Colipa Method with 5 Volunteers)

<u>Raw Materials:</u>	<u>Wt%</u>
A Eusolex T-2000 (Art. No. 1.05373) (Micron. Titanium Dioxide)	10.00
Emulsifier E-2155 (Stearyl Alcohol (and) Steareth-7 (and) Steareth-10)	3.00
Teginacid H (Glyceryl Stearate (and) Ceteth-20)	3.00
Luvitol EHO (Cetearyl Octanoate)	10.50
Imwitor 900 (Glyceryl Stearate)	3.00
Cetiol (Oleyl Oleate)	4.00
Lunacera M (Microwax)	1.00
Miglyol 812 neutral oil (Caprylic/Capric Triglyceride)	4.00
B Propanediol-1,2 (Art.-No. 1.07478) (Propylene Glycol)	4.00
Allantoin (Art.-No. 1.01015)	0.20
Preservatives	q.s.
Water, demineralized	ad 100.00

Procedure:

Heat phase A to 75C and phase B to 80C. Add phase B slowly to phase A while stirring, homogenize and cool down while stirring.

Note:

Viscosity 24,600 mPas (Brookfield RVT Sp. C, 10 rpm) at 24C

Samples contain as preservatives:

0.05% Propyl-4-hydroxybenzoate (Art. No. 1.07427)

0.15% Methyl-4-hydroxybenzoate (Art. No. 1.06757)

Formulation 03-36/K

Self Tanning Milk (W/O)

<u>Raw Materials:</u>	<u>Wt%</u>
A Dow Corning 3225 C	23.600
B Dihydroxyacetone (Art.-No. 10150)	5.000
Propanediol-1,2 (Art.-No. 7478)	35.900
Preservatives	q.s.
Water, demineralized	ad 100.000

Procedure:

Dissolve phase B and add it to phase A.

Note:

Transparent, oil-free W/O

Adjusting of transparency through variation of ratio water/propanediol-1,2.

Viscosity 12,000 mPas (Brookfield RVT, Sp.4, 10 rpm) at 24C

Samples contain as preservatives:

0.05% Propyl-4-hydroxybenzoate (Merck-Art.-No. 7427)

0.15% Methyl-4-hydroxybenzoate (Merck-Art.-No. 6757)

Formulation 01-01/L

SOURCE: Rona-Merck: Suggested Formulations

Sun Protection Lotion (W/O)SPF 20 (Sun Protection Factor, Colipa Method with 5 Volunteers)Raw Materials:

	Wt%
A Eusolex T 2000 (Art.-No. 105373) (Micron. Titandioxid)	3.00
Eusolex 6300 (Art.-No. 1.05385) (4-Methylbenzylidene Camphor)	2.00
Abil WE 09 (Polyglyceryl-4 Isostearate (and) Cetyl Dimethicone Copolyol (and) Hexyl Laurate)	5.00
Jojoba Oil (Jojoba (Buxus Chinensis) Oil)	6.00
Cetiol V (Decyl Oleate)	6.00
Prisorine 2021 (Isopropyl Isostearate)	4.50
Castor Oil (Ricinus Communis)	1.00
Lunacera M (Microwax)	1.80
Miglyol 812 Neutral Oil (Caprylic/Capric Triglyceride)	4.50
DL- α -Tocopherolacetate (Art.-No. 5.00952) (Tocopheryl Acetate)	1.00
Vitamin-A-palmitate (Retinyl Palmitate)	0.50
B Eusolex 232 (Art.-No. 105372) (Phenylbenzimidazole Sulfonic Acid)	2.00
Tris(hydroxymethyl)-aminomethane (Art.-No. 1.08386) (Tromethamine)	0.90
Glycerol (about 87%) (Art. No. 1.04091)	2.00
Sodium Chloride (Art. No. 1.06400)	0.40
Allantoin (Art.-No. 1.01015)	0.20
Preservatives	q.s.
Water, demineralized	ad 100.00

Procedure:

To neutralize Eusolex 232 dissolve Tris(hydroxymethyl)-aminomethane in the water of phase B and add Eusolex 232 while stirring. When uniform add the remaining ingredients of phase B and heat to 80C. Heat phase A to 75C. Add phase B slowly to phase A while stirring. Homogenize and cool down while stirring.

Notes:

Viscosity 24,600 mPas (Brookfield RVT, Sp. C) at 24C

Samples contain as preservatives:

0.05% Propyl-4-hydroxybenzoate (Art. No. 1.07427)

0.15% Methyl-4-hydroxybenzoate (Art. No. 1.06757)

SOURCE: Rona-Merck: Formulation 39-44/E

Sunscreen Cream W/O, fatty

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 840 Gel B	20
Softisan 649	5
Imwitor 780K (Isostearyl Glyceryl Succinate)	5
Mineral Oil	8
Neo Heliopan E 1000	3
Paraffin	3
B. Magnesium Sulphate	2
Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is homogeneously stirred and heated up to approx. 75C. B is brought to the same temperature and emulsified into A. C is added at about 30C.

Sunscreen Cream, W/O-type

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol Gel B	24
Softisan 649	12
Imwitor 780K (Isostearyl Glyceryl Succinate)	5
Softigen 701 (Glyceryl Ricinoleate)	1.5
Petrolatum	20
Paraffin	8
Neo Heliopan E 1000 (sun filter)	2.5
B. Preservative	q.s.
Water ad	100
C. Fragrance	q.s.

Preparation:

A is blended, heated to about 75C and homogenized. B is brought to the same temperature and emulsified into A. After that emulsion is cooled down to about 30C and C is added.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Sunscreen Lotion**Concept Statement:**

Smooth, elegant and effective sunscreen using Pationic SCL for skin conditioning.

Ingredients/Function:

	Wt%
1. Distilled/Deionized Water	70.70
2. Acritamer 941 (Carbomer)/Thickener	0.15
3. NaOH (20% Soln.)/pH Adjustment	q.s.
4. Propylene Glycol/Humectant	2.00
5. Tetrasodium EDTA/Chelate	0.05
6. Methylparaben/Preservative	0.20
7. Pationic SCL (Sodium Cocoyl Lactylate)/Lactylate	0.50
8. Rita Cetearyl Alcohol 50/50 (Cetearyl Alcohol)/Emulsifier	1.60
9. Rita GMS (Glyceryl Stearate)/Emulsifier	4.00
10. Octyl Methoxycinnamate/Sunscreen	7.00
11. Benzophenone-3/Sunscreen	2.00
12. Octyl Salicylate/Sunscreen	3.50
13. C12-15 Alkyl Benzoate/Emollient	5.00
14. Rita IPP (Isopropyl Palmitate)/Emollient	2.00
15. Shebu Refined (Shea Butter)/Emollient	1.00
16. Propylparaben/Preservative	0.10
17. DMDM Hydantoin/Preservative	0.20

Compounding Procedure:

Slowly disperse item 2 into item 1. Add item 3 to neutralize pH to 6.5-7.0 and add items 4-6. Heat to 80°C. Combine items 7 to 16 and heat to 80°C. Add oil phase to water phase with agitation. Cool to 40°C and add item 17.

LI Ref. No. 124-71

After Sun Rich Moisturizing Lotion**Concept Statement:**

A glossy white lotion which adds rich moisture to the skin with Pationic SSL, Ritaloe, Ritamectant PCA and Rita HA C-1-C.

Ingredients/Function:

	Wt%
1. Distilled/Deionized Water	77.40
2. Propylene Glycol	4.00
3. Ritaloe 20X (Aloe Vera)/Moisturizer	1.00
4. Tetrasodium EDTA	0.10
5. Pationic SSL (Sodium Stearoyl Lactylate)/Lactylate	1.00
6. Rita Cetearyl Alcohol 50/50 (Cetearyl Alcohol)/Emulsifier	2.00
7. Rita GMS (Glyceryl Stearate)/Emulsifier	2.00
8. Rita IPP (Isopropyl Palmitate)/Emollient	7.00
9. Shebu Refined (Shea Butter)/Emollient	1.00
10. Ritasil 190 (Dimethicone Copolyol)/Lubricant	0.50
11. Hydrogenated Coconut Oil/Emollient	2.00
12. Lanodent DM (DMDM Hydantoin)/Preservative	0.50
13. Ritamectant PCA (Sodium PCA)/Moisturizer	1.00
14. Rita HA C-1-C (Sodium Hyaluronate)/Moisturizer	0.50

Compounding Procedure:

Combine items 1 to 4 and heat to 80°C. Combine items 5 to 11 and heat to 80°C. Add oil phase to water phase with agitation. Cool to 40°C and add items 12 to 14.

LI Ref. No. 124-76B

SOURCE: R.I.T.A. Corp.: Sun Care Formulations

Sunscreen Lotion
Soft lotion, water resistant

<u>Ingredients:</u>	<u>Wt%</u>
A Stearic Acid	6.00
Cetyl Alcohol	1.00
Isopropyl Myristate	1.00
Luviskol VA 64/PVP	2.00
Eusolex 8020/Isopropyl Dibenzoylmethane	5.00
Eusolex 4360/Benzophenone-3	2.50
Wacker-Belsil DM 350/Dimethicone	3.50
B Water	62.00
Tylose H 4000 P/Hydroxyethylcellulose	0.50
C Triethanolamine	2.50
Wacker-Belsil CM 040/Cyclomethicone	16.00
Preservative, fragrances, pigments	q.s.

Dissolve Tylose in water and heat to 80-85C. Heat A to 80C and stir into B, cool to 45C and add C, stir cold.
Formulation 723 AH

Suntan Cream
Creamy. Easy to distribute, good absorption.

<u>Ingredients:</u>	<u>Wt%</u>
A Wacker-Belsil DM 100/Dimethicone	2.50
Cetyl Alcohol	2.00
Stearic Acid	4.00
Eusolex 6300/Methylbenzylidene Camphor	3.00
Wacker-Belsil TMS 3069 VP/Dimethicone, Trimethylsiloxysilicate	5.00
B Glycerine	1.50
Triethanolamine	0.90
Water	80.10
Preservative, fragrances, pigments	q.s.

Heat A and B each to 80C. Stir A into B and stir cold.
Formulation 435/2 AH

SOURCE: Wacker-Chemie GmbH: Formulas for Beauty

Suntan Oil

This oil goes on smoothly and leaves the skin feeling soft and supple. Mineral oil adds moisturizing benefits to the skin while esters add dryness.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
Mineral Oil/Drakeol 7	64.65
Octyl Palmitate/Ceraphyl 368	18.00
Octyldodecyl Neopentanoate/Elefac I-205	7.80
Octyl Methoxycinnamate/Escalol 557	3.00
Octyl Salicylate/Escalol 587	3.00
Macadamia Nut Oil	1.00
Kukui Nut Oil	1.00
Sweet Almond Oil	1.00
Fragrance	0.40
Isopropylparaben (and) Isobutylparaben (and) Butylparaben/Liquapar Oil	0.15

Procedure:

Heat all ingredients except fragrance to 40C with stirring. Hold at this temperature until the mixture is homogeneous. Let cool to 35C. Add fragrance with stirring.
Formula 597-77

Sunscreen with TiO₂

This creamy lotion goes on smoothly and rubs in easily. Mineral oil and petrolatum add moisturization, and no white residue is left behind after application.

<u>Ingredient/Trade Name:</u>	<u>Wt%</u>
A: Mineral Oil/Drakeol 9	7.00
Petrolatum/Amber Petrolatum	6.00
Cetearyl Alcohol (and) Polysorbate 60/Lipowax P	4.00
Isostearyl Isostearate/Prisorine 2039	1.70
Cocoa Butter	0.10
Tocopheryl Acetate/Vitamin E Acetate	0.10
Propylparaben	0.10
B: Deionized Water	74.05
Water (and) Titanium Dioxide/Tioveil AQ-G	5.00
Magnesium Aluminum Silicate/Veegum Ultra	1.75
Methylparaben	0.10
C: Diazolidinyl Urea/Germall II	0.10
Fragrance	q.s.

Procedure:

Heat part A to 80-85C with gentle mixing until all the solids have dissolved. Heat Part B to 75-80C with stirring. Add part A to B with stirring and continue mixing while allowing the mixture to cool. At 40C, add part C. Continue stirring to 30C.
Formula 597-87

SOURCE: Penreco: Suggested Formulations

Waterproof SPF 30 Sunscreen

This sunscreen formula containing Croda's new conditioning and emulsifying system Crodafos CES was clinically tested by AMA Laboratories for its Sun Protection Factor (SPF) and shown to have a static SPF of 31.66 and a Waterproof SPF of 30.31. The ability of Crodafos CES to increase oil deposition and improve wash-off resistance appears to enhance the formula's sunscreen performance and contribute to the high SPF.

<u>Ingredients:</u>	<u>Weight%</u>
Deionized Water	63.23
Carbopol 981	0.13
Crodafos CES (Cetearyl Alcohol (and) Cetearyl Phosphate)	6.50
Benzophenone-3	5.00
Octyl Methoxycinnamate	7.50
Octyl Salicylate	5.00
Menthyl Anthranilate	5.00
Crodamol OS (Octyl Stearate)	5.00
NaOH-10% Soln.	1.54
BHT	0.10
Propylene Glycol (and) Diazolidinyl Urea (and) Methyl Paraben (and) Propyl Paraben	1.00

pH=5.8+-0.5

Viscosity=17,000 cps+-10% (RVT Spindle TB, 10 rpm @ 25C).

Static SPF=31.66 Waterproof SPF=30.31

Procedure:

Dust Carbopol into the deionized water while stirring rapidly. Mix well for good hydration. Begin heating to 75-80C. Add Crodafos CES and mix well until all is melted and homogeneous. Add Benzophenone-3, Octyl Methoxycinnamate, Octyl Salicylate, Menthyl Anthranilate and Crodamol OS individually and with good mixing. Continue mixing at 75-80C, until homogeneous. Begin slow cooling and at 60C add NaOH solution. Cool to 45C and add BHT and preservative.

N.A.T.C Approved

SOURCE: Croda Inc.: Formulation SC-260

**Water-Resistant Sunscreen Lotion Using Avalure AC 118,
Pemulen TR-2 & Carbopol Ultrez 10 Polymers
SPF 24/A0005**

This high SPF sunscreen lotion provides long-lasting UV protection and has excellent water-resistant properties provided by Avalure AC 118 film-forming polymer and Pemulen TR-2 polymeric emulsifier.

INCI-CTFA Name/Trade Name:**Wt%****Part A:**

1. Deionized Water	66.10
2. Carbopol Ultrez 10 Polymer/Carbomer	0.25
3. Methocel E4M/Hydroxypropyl Methylcellulose	0.10
4. Propylene Glycol	1.00
5. Nuosept C/Polymethoxy Bicyclic Oxazolidine	0.40
6. Disodium EDTA	0.05
7. Crovol A-40/PEG-20 Almond Glycerides	0.40

Part B:

8. Neo Heliopan, Type AV/Octyl Methoxycinnamate	7.50
9. Neo Heliopan, Type OS/Octyl Salicylate	5.00
10. Neo Heliopan, Type BB/Oxybenzone	6.00
11. Finsolv TN/C12-15 Alcohols Benzoate	5.00
12. Pemulen TR-2 Polymer	0.25

Part C:

13. AMP-95/Aminomethyl Propanol	0.30
14. Avalure AC 118 Polymer/Acrylates Copolymer	7.50
15. Fragrance #99189 "Twister"	0.15

Properties:

Appearance: Milky white emulsion

pH: 6.0-6.5

Viscosity (cP): 18,000-24,000

SPF: 24

Stability: Passed 45C, accelerated 1 month

Passed freeze/thaw-3 cycles

Preparation Procedure:

1. Part A: Disperse Carbopol Ultrez 10 polymer and Methocel E4M in warm deionized water (40-50C). Reduce mixing speed after polymers are dispersed.
2. When uniform, add other Part A ingredients and mix until uniform.
3. Part B: Combine first four ingredients in Part B in a separate vessel. Heat and mix until oxybenzone has dissolved.
4. Cool Part B to 45C. Disperse Pemulen TR-2 in Part B and mix until well dispersed.
5. With vigorous agitation, add Part B to Part A. Mix for 20 minutes or until a smooth, non-grainy dispersion is apparent.
6. Add AMP-95 to batch, mix until a smooth product is obtained.
7. Add Avalure AC 118 and fragrance to batch. Mix until uniform.

SOURCE: BFGoodrich Specialty Chemicals: Formulation A0005

Water Resistant Sunscreen with SPF 15

SC1318, silicone resin ester, is a substantive emollient, forming a durable, water resistant film which holds the active ingredient on the skin. This SPF 15 sunscreen stays with you while you are active.

Ingredient/Function:**Wt%****Part A:**

Deionized Water/Diluent	74.13
Tetrasodium EDTA/Preservative	0.05
PEG-8/Humectant	4.00
Phenoxyethanol (and) Methylparaben (and) Butylparaben (and) Ethylparaben (and) Propylparaben (1)/Preservative	0.25
Magnesium Aluminum Silicate/Slip/Feel	0.25

Part B:

Diisostearyl Trimethylolpropane Siloxysilicate (SF1318) (2)/Film-former/Emollient	7.00
Octyl Methoxycinnamate/UV absorber	7.00
Octyl Salicylate/UV absorber	3.00
Benzophenone-3/UV absorber	3.00
Acrylates/C10-30 Alkyl Acrylate Crosspolymer (3)/Emulsifier/Thickener	0.30
Carbomer (4)/Thickener	0.15
Sorbitan Oleate/Emulsifier	0.20

Part C:

Fragrance	0.12
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Part D:

Triethanolamine 99%/Neutralizer	0.55
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Procedure:

1. Heat water of Part A to 75C. Add remaining ingredients in order with moderate propeller agitation, making sure that all parabens have dissolved. Mix for 15 minutes, while cooling to 50C.
2. Combine Part B with sweep agitation at ambient temperature. Mix until a smooth "paste" is obtained.
3. Add Part B at room temperature to Part A (at 50C) with rapid propeller agitation. Mix for 30 minutes, or longer to ensure that the polymers are completely dispersed.
4. Cool with agitation to 45C. Add Part C to batch with moderate propeller agitation. Mix 10 minutes.
5. Add Part D to batch at 40C. Mix with moderate agitation for 20 minutes. Cool to room temperature.
6. The pH should be 6-7.

Trade Names/Suppliers:

- (1) Phenonip, Nipa
- (2) GE Silicones
- (3) Pemulen TR-1, B.F. Goodrich
- (4) Carbopol 2984, B.F. Goodrich

SOURCE: GE Silicones: Personal Care Formulary: Formula SC 100

1* Protection (Organic) SPF 2

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Light Mineral Oil	5.000
2	Cetearyl Octanoate	2.000
3	AEC Dimethicone V100	1.000
4	Cocoa Butter, Refined	0.300
5	Beeswax; White Pellets	1.000
6	AEC Sorbitan Palmitate	3.000
7	Cetearyl Alcohol	1.500
8	Octyl Dimethyl PABA	2.000
9	AEC Benzophenone-3	0.000
Aqueous Phase:		
10	Water; Pure	75.400
11	Xanthan Gum	0.200
12	Veegum Regular	1.500
13	Glycerine BP	3.000
14	AEC Polysorbate 20	3.000
15	Sodium Lactate 60%	0.300
16	Add preservative(s) & color to suit	0.500
Cooling Cycle:		
17	Fragrance	0.300
Formula Ref.: 45*		

1* Protection (Organic) SPF 4

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Light Mineral Oil	5.000
2	Cetearyl Octanoate	2.000
3	AEC Dimethicone V100	1.000
4	Cocoa Butter, Refined	0.300
5	Beeswax; White Pellets	1.000
6	AEC Sorbitan Palmitate	3.000
7	Cetearyl Alcohol	1.500
8	Octyl Dimethyl PABA	4.000
9	AEC Benzophenone-3	0.000
Aqueous Phase:		
10	Water; Pure	73.500
11	Xanthan Gum	0.200
12	Veegum Regular	1.500
13	Glycerine BP	3.000
14	AEC Polysorbate 20	3.000
15	Sodium Lactate 60%	0.300
16	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
17	Fragrance	0.200

Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool. pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 45* and 46*

1* Protection (Organic) SPF 6

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Light Mineral Oil	5.000
2	Cetearyl Octanoate	2.000
3	AEC Dimethicone V100	1.000
4	Cocoa Butter, Refined	0.300
5	Beeswax, White Pellets	1.000
6	AEC Sorbitan Palmitate	3.000
7	Cetearyl Alcohol	1.500
8	Octyl Dimethyl PABA	5.000
9	AEC Benzophenone-3	0.500
Aqueous Phase:		
10	Water; Pure	72.000
11	Xanthan Gum	0.200
12	Veegum Regular	1.500
13	Glycerine BP	3.000
14	AEC Polysorbate 20	3.000
15	Sodium Lactate 60%	0.300
16	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
17	Fragrance	0.200

1* Protection (Organic) SPF 8

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
Oil Phase:		
1	Light Mineral Oil	5.000
2	Cetearyl Octanoate	2.000
3	AEC Dimethicone V100	1.000
4	Cocoa Butter, Refined	0.300
5	Beeswax; White Pellets	1.000
6	AEC Sorbitan Palmitate	3.000
7	Cetearyl Alcohol	1.500
8	Octyl Dimethyl PABA	4.000
9	AEC Benzophenone-3	2.000
Aqueous Phase:		
10	Water; Pure	71.500
11	Xanthan Gum	0.200
12	Veegum Regular	1.500
13	Glycerine BP	3.000
14	AEC Polysorbate 20	3.000
15	Sodium Lactate 60%	0.300
16	Add preservative(s) & colour to suit	0.500
Cooling Cycle:		
17	Fragrance	0.200

Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the Water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool. pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 47* and 48*

3 Star Sun Protection SPF 2

<u>Stage Materials:</u>	<u>Wt%</u>
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Stage:	
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Oil Phase:	
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1 Octyl Palmitate	5.000
2 Cetearyl Octanoate	5.000
3 AEC Dimethicone V100	3.000
4 Tenox 2	0.010
5 Beeswax; White Pellets	3.500
6 AEC Sorbitan Palmitate	3.000

Aqueous Phase:	
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7 Water; Pure	67.390
8 Xanthan Gum	0.200
9 Veegum Regular	2.000
10 Propylene Glycol USP	5.000
11 AEC Polysorbate 20	3.000
12 Tioveil AQ N	2.000
13 Add preservative(s) & colour to suit	0.500
14 Sodium Lactate 60%	0.300

Cooling Cycle:	
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15 Fragrance	0.100
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Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool.

pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 35*

3 Star Sun Protection SPF4

<u>Stage Material:</u>	<u>Wt%</u>
<u>Stage:</u>	
<u>Oil Phase:</u>	
1 Octyl Palmitate	5.000
2 Cetearyl Octanoate	5.000
3 AEC Dimethicone V100	3.000
4 Tenox 2	0.010
5 Beeswax; White Pellets	3.500
6 AEC Sorbitan Palmitate	3.000
<u>Aqueous Phase:</u>	
7 Water; Pure	65.390
8 Xanthan Gum	0.200
9 Veegum Regular	2.000
10 Propylene Glycol USP	5.000
11 AEC Polysorbate 20	3.000
12 Tioveil AQ N	4.000
13 Add preservative(s) & colour to suit	0.500
14 Sodium Lactate 60%	0.300
<u>Cooling Cycle:</u>	
15 Fragrance	0.100

Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the Water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool.

pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 36*

3 Star Sun Protection SPF 6

<u>Stage:</u>	<u>Material:</u>	<u>Wt%</u>
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Oil Phase:

1	Octyl Palmitate	5.000
2	Cetearyl Octanoate	5.000
3	AEC Dimethicone V100	3.000
4	Tenox 2	0.010
5	Beeswax; White Pellets	3.500
6	AEC Sorbitan Palmitate	3.000

Aqueous Phase:

7	Water; Pure	63.390
8	Xanthan Gum	0.200
9	Veegum Regular	2.000
10	Propylene Glycol USP	5.000
11	AEC Polysorbate 20	3.000
12	Tioveil AQ N	6.000
13	Add preservative(s) & colour to suit	0.500
14	Sodium Lactate 60%	0.300

Cooling Cycle:

15	Fragrance	0.100
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Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the Water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool.

pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 37*

3 Star Sun Protection SPF 8Stage: Material:Wt%Oil Phase:

1	Octyl Palmitate	5.000
2	Cetearyl Octanoate	5.000
3	AEC Dimethicone V100	3.000
4	Tenox 2	0.010
5	Beeswax; White Pellets	3.500
6	AEC Sorbitan Palmitate	3.000

Aqueous Phase:

7	Add preservative(s) & colour to suit	0.500
8	Water; Pure	61.390
9	Xanthan Gum	0.200
10	Veegum Regular	2.000
11	Propylene Glycol USP	5.000
12	AEC Polysorbate 20	3.000
13	Tioveil AQ N	8.000
14	Sodium Lactate 60%	0.300

Cooling Cycle:

15	Fragrance	0.100
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Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the Water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool.

pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 38*

3 Star Sun Protection SPF 15**Stage: Material:****Wt%****Oil Phase:**

1	Octyl Palmitate	5.000
2	Cetearyl Octanoate	5.000
3	AEC Dimethicone V100	3.000
4	Tenox 2	0.010
5	Beeswax; White Pellets	3.500
6	AEC Sorbitan Palmitate	3.000

Aqueous Phase:

7	Water; Pure	54.390
8	Xanthan Gum	0.200
9	Veegum Regular	2.000
10	Propylene Glycol USP	5.000
11	AEC Polysorbate 20	3.000
12	Sodium Lactate 60%	0.300
13	Tioveil AQ N	15.000
14	Add preservative(s) & colour to suit	0.500

Cooling Cycle:

15	Fragrance	0.100
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Mixing Instructions:

Heat the Oil Phase to 70C.

Disperse the Xanthan Gum and Veegum in the Water and heat to 70C, adding the remaining Aqueous Phase ingredients while doing so and with continuous stirring.

When both phases are to temperature slowly add the Oils to the Water while mixing.

Cool to 35C with stirring and add perfume. Remix briefly with a Silverson type mixer when cool.

pH=5.5-6.5 approx.

SOURCE: A&E Connock Ltd.: Formula Ref.: 39*

Section XII

Miscellaneous

Anhydrous Basic Ointment

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan 649	10
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Softigen 701 (Glyceryl Ricinoleate)	4
Imwitor 780K (Isostearyl Glyceryl Succinate)	3
Petrolatum	68
Permulin 4101 (co-emulsifier)	10

Preparation:

All ingredients are melted, mixed and stirred cold.

Analgesic Suppositories

<u>Raw Materials:</u>	<u>Parts by Weight</u>
Trimethobenzamid-HCl	0.200g
Benzocain	0.030g
Witepsol H15 (Hard Fat, DAB 10)	1.800g
Softigen 710	0.200g

Heparin Gel

<u>Raw Materials:</u>	<u>Wt%</u>
Heparin sodium	50,000IE
Softigen 767	10
Carbopol 980 (Carbomer)	1.5
NaOH solution, 10%	4
Preservative	q.s.
Water ad	100

Preparation:

Dissolve the heparin sodium in the quantitative of water specified, add preservative. After weighing the quantity, add Carbopol and NaOH solution and stir well until a homogeneous gel is obtained. Gradually mix the gel with the Softigen.

Heparin Cream

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan 601	18
Imwitor 960 flakes (Glyceryl Stearate SE)	5
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Cetyl Alcohol	3
B. Preservative	q.s.
Water ad	100
C. Heparin sodium	20000IE

Preparation:

A is heated to about 75C, B is brought to the same temperature and emulsified into A. At about 25C A+B is put into C portion by portion.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Emulsion O/W with Lactokine Fluid

<u>Ingredients:</u>	<u>Wt%</u>
a) Arlatone 985	4.00
G-4822	2.00
Arlamol M 812	5.00
Paraffinum, perliquidum	5.00
Phenonip	0.30
b) Water, distilled	75.40
Phenonip	0.30
1,2-Propylene glycol	3.00
c) Lactokine Fluid	5.00

Manufacture:

- a) melt and bring to about 70C;
- b) heat to about 70C and stir into a).
Continue stirring until the cream has cooled to about 30C;
- c) stir in.
Perfume, homogenize

Body Emulsion O/W with Glycoderm (P) and Cutavit Richter

<u>Ingredients:</u>	<u>Wt%</u>
a) Emulgade SE	8.00
Cetiol LC	5.00
Eutanol G	5.00
Cutavit Richter	2.00
Phenonip	0.30
b) Water, distilled	65.60
Phenonip	0.30
Glycerin	3.00
Ultrez 10	0.20
NaOH 10%	0.60
c) Glycoderm (P)	10.00

Manufacture:

- a) melt and bring to approx. 70C;
- b) bring to approx. 70C and add to a) with stirring.
Continue stirring until cooled to approx. 30C;
- c) add with stirring.
Perfume, homogenize.

SOURCE: Chemisches Laboratorium Dr. Kurt Richter GmbH: Formulas

Emulsion O/W with 5% Epicutin-TTIngredients:

	<u>Wt%</u>
a) Cutina FS 25	2.00
Cutina CBS	3.00
Cetiol V	13.00
Phenonip	0.30
b) Water, distilled	61.40
Phenonip	0.30
Glycerin	5.00
KOH 1%	10.00
c) Epicutin-TT	5.00

Manufacture:

- a) melt and bring to about 80C;
- b) heat to about 80C and stir into a).
Continue stirring until the emulsion has cooled to about 30C;
- c) stir in.
Perfume, homogenize.

Emulsion O/W with Epicutin-TTIngredients:

	<u>Wt%</u>
a) Arlatone 985	4.00
G-4822	2.00
Arlamol M 812	5.00
Paraffinum, perliquidum	5.00
Phenonip	0.30
b) Water, distilled	75.40
Phenonip	0.30
1,2-Propylene glycol	3.00
c) Epicutin-TT	5.00

Manufacture:

- a) melt and bring to about 70C;
- b) heat to about 70C and stir into a).
Continue stirring until the cream has cooled to about 30C;
- c) stir in.
Perfume, homogenize

SOURCE: Chemisches Laboratorium Dr. Kurt Richter GmbH: Formulas

Fatty Ointment with Echinacea, W/O

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 780K (Isostearyl Diglyceryl Succinate)	6
Imwitor 928 (Glyceryl Cocoate)	3
Miglyol 812 (Caprylic/Capric Triglyceride)	7
Petrolatum	9
Elfacos ST9 (stabilizer)	4
Elfacos C26 (Hydroxyoctacosanyl Hydroxystearate)	4
B. D-Panthenol	5
Preservative	q.s.
Water ad	100
C. Echinacea-Liquidum	2

Microemulsion, Emulsified at Room Temperature

<u>Raw Materials:</u>	<u>Wt%</u>
A. Miglyol 812 (Caprylic/Capric Triglyceride)	20
Softigen 767 (PEG-6 Caprylic/Capric Glycerides)	30
Imwitor 380 (Glyceryl Cocoate/Citrate Lactate)	30
Water	20

Preparation:

All components are stirred together.

Skin Milk of Low Viscosity, Perfume Free

<u>Raw Materials:</u>	<u>Wt%</u>
A. Imwitor 370 (Glyceryl Stearate Citrate)	6
Miglyol 812 (Caprylic/Capric Triglyceride)	15
B. Sorbic Acid	0.2
Water ad	100

Preparation:

A is heated to 70-80C and B of same temperature is added to A.

Wound and Healing Ointment

<u>Raw Materials:</u>	<u>Wt%</u>
A. Softisan 601	25
Miglyol 812 (Caprylic/Capric Triglyceride)	5
Imwitor 960 flakes (Glyceryl Stearate SE)	5
Zinc Oxide	10
Cremophor EL (Hydrogenated Castor Oil)	2
B. Benzocain	2
Preservative	q.s.
Water ad	100

Preparation:

A is melted at about 75C and stirred homogeneously. B is brought to the same temperature and emulsified into A. Then stir cold.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Insect Repellent Cream (W/O)
with UV-Filter

<u>Raw Materials:</u>	<u>Wt%</u>
A Insect Repellent 3535 (Art.-No. 111887) (Ethyl Butyl-acetylaminopropionate)	20.00
B Eusolex 6300 (Art.-No. 105385) (4-Methylbenzylidene Camphor)	3.00
Dow Corning 3225C (Cyclomethicone (and) Dimethicone Copolyol)	12.00
Dow Corning 344 (Cyclomethicone)	2.50
Bentone paste SIL (Cyclomethicone (and) Stearalkonium Hectorite (and) SD Alcohol 40)	15.00
Solvent ID (Isododecane)	7.30
Witconol 14 (Polyglyceryl-4 Oleate)	2.50
Beeswax, white (Art.-No. 111544) (Beeswax)	2.00
Carnauba wax (Copernica Cerifera)	0.50
C Sodium chloride (Art.-No. 106400)	2.00
Propanediol-1,2 (Art.-No. 107478) (Propylene Glycol)	2.00
Preservatives	q.s.
Water, demineralized	ad 100.00

Procedure:

Mix phase C. Heat phase B to 80C, stir until clear and cool to 25C. Add phase A to phase B. Add phase C. Homogenize. As required add perfume.

Note:

Samples contain as preservatives

0.20% Euxyl K400

Formulation 14-04/F

Insect Repellent Lotion

<u>Raw Materials:</u>	<u>Wt%</u>
A Insect Repellent 3535 (Art. No. 111887) (Ethyl Butyl-acetylaminopropionate)	20.00
Polyethylene glycol 400 (Art. No. 817003) (PEG-8)	5.00
B Ethanol 96% (Art. No. 100971)	35.00
Water, demineralized	15.00
C Polyethylene glycol 1500 (Art. No. 817005) (PEG-30)	4.00
D Arlamol E (PPG-15 Stearyl Ether)	3.00
Perfume oil Bariton (10607)	0.30
E Water, demineralized	17.70

Procedure:

Blend phase D. Mix phase B and incorporate phases A, C, D and E while stirring.

Note:

pH22C=5.8

Formulation 10-01/F

SOURCE: Rona-Merck: Suggested Formulations

Peppermint Foot Balm

A cooling peppermint foot balm formulation containing Bentone Gel LOI rheological additive

Ingredients:

	Wt%
Cetearyl Alcohol (and) Cetareth 20	5.00
Cetyl Alcohol	3.00
Caprylic/Capric Triglyceride	8.00
Aloe Vera Gel 10:1 decolorized	1.50
Methyl Pyrrolidone Carboxylate	0.80
Glycerine-Vegetable derived	5.00
Methyl Gluceth 10	2.00
Propylene Glycol and Lichen Extract	0.20
Perfume Peppermint	0.30
Methyldibromoglutaronitrile (and) Dipropylene Glycol	0.20
FDC Yellow 5 (0.1% solution)	0.40
FDC Green 3 (0.1% solution)	0.20
Bentone Gel LOI	2.00
Deminerlized Water	
	Bal to 100%
	(pH approx. 6.0)

Method of Manufacture:

1. Thoroughly disperse the Bentone Gel LOI additive in the oil phase, add the Methyl, Pyrrolidone Carboxylate and heat to 75-80C.
2. Heat the aqueous phase (water, colors, Aloe Vera, Glycerine, and Methyl Gluceth 10) to 75-80C.
3. Using high shear mixing, add the two phases together and continue to homogenize.
4. At 45-50C transfer to a propeller stirrer and at 40C add the Propylene Glycol and Lichen Extract.
5. Add the perfume and preservative below 30C.

This is a rich, oil-in-water cream, containing Aloe Vera and a fungicide. The presence of the coolant (Methyl Pyrrolidone Carboxylate) gives a refreshing sensation. The stability, viscosity control, and in particular, the excellent skin feel during and after application are provided by Bentone Gel LOI additive.

SOURCE: Rheox, Inc.: Elementis Specialties: Suggested Formula

Rheumatic Ointment

<u>Raw Materials:</u>		<u>Wt%</u>
A. Softisan Gel		25
Mineral Oil		15
Imwitor 780K (Isostearyl Diglyceryl Succinate)		5
B. Preservative		q.s.
Water ad		100
C. Miglyol 812 (Caprylic/Capric Triglyceride)		3
Camphor		0.5
D. Benzyl Nicotinate		1

Preparation:

A is stirred homogeneously and warmed up to approx. 75C. B is brought to the same temperature slowly emulsified into A. C is warmed until camphor is dissolved and then stirred into the hot emulsion. After cooling down D is emulsified into the cream.

Haemorrhoidal Ointment

<u>Raw Materials:</u>		<u>Wt%</u>
A. Softisan Gel		15
Petrolatum, white		15
Imwitor 780K (Isostearyl Diglyceryl Succinate)		5
B. Allantoin		1
Heparin-Na		10000IE
Lidocain-HCl x H2O		0.4
Preservative		q.s.
Water ad		100
C. Basic Bismuth Nitrate		5

Preparation:

At first A is stirred to a homogeneous mass and heated to approx. 75C. Solution B is brought to the same temperature and prepared together with A to an emulsion. After cooling down to room temperature C is dispersed homogeneously in A+B.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Rheumatism OintmentRaw Materials:

	<u>Wt%</u>
A. Benzyl Nicotinate	0.3
B. Imwitor 780K (Isostearyl Diglyceryl Succinate)	5
Miglyol Gel B	25
Mineral Oil	15
C. Camphor	2
Miglyol 812 (Caprylic/Capric Triglyceride)	3
D. Heparin sodium	5000 I.E.
Aqua conservans ad	100

Preparation:

B is homogeneously stirred first and then melted at about 75C. The heparin is dissolved in a part of water. The water residue, after heating to about 75C, is compounded with B to an emulsion. Phase C is heated until camphor is dissolved and is then added to the hot ointment. After cooling down A and the heparin solution are emulsified into the cream.

Nasal OintmentRaw Materials:

	<u>Wt%</u>
A. Ephedrine-HCl	0.05
Camphor	0.15
Peppermint Oil	0.30
Eucalyptus Oil	0.90
Fennel Oil	0.60
B. Miglyol Gel B	10
Imwitor 780K (Isostearyl Diglyceryl Succinate)	5
Mineral Oil	17
Paraffin	3
C. Aqua conservans ad	100

Preparation:

Ephedrine-HCl is dissolved in a small amount of water. B is heated up to approx. 75C and then homogenized. C is brought to the same temperature and emulsified into B. After cooling down to below 40C the ephedrine solution and the mixture of the remaining components of A are admixed.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Wound- and Healing OintmentRaw Materials:

	<u>Wt%</u>
A. Zinc Oxide	10
D-Panthenol	3
Vitamin A	0.3
B. Imwitor 780K (Isostearyl Diglyceryl Succinate)	6
Miglyol 812 (Caprylic/Capric Triglyceride)	7
Paraffin	5
Petrolatum	13
Lunacera P (Microwax)	3
C. Aqua conservans ad	100

Preparation:

B and C are each heated up to approx. 75C and then admixed until an emulsion is obtained. The zinc oxide is manufactured homogeneously with the finished ointment. At last the vitamin A is added.

Urea Cream, W/ORaw Materials:

	<u>Wt%</u>
A. Miglyol 812 (Caprylic/Capric Triglyceride)	7
Imwitor 780K (Isostearyl Diglyceryl Succinate)	6
Imwitor 928 (Glyceryl Cocoate)	3
Petrolatum	9
Elfacos ST9 (stabilizer)	4
Elfacos C26 (Hydroxyoctacosanyl Hydroxystearate)	5
B. Urea	10
Preservative	q.s.
Citrate buffer solution ad	100

Preparation:

A is heated to 75C. B is brought to the same temperature and emulsified into A.

SOURCE: Huls Aktiengesellschaft: Suggested Formulations

Section XIII

Trade-Named Raw Material

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
A-625	Sorbitol	ICI
Abil B 8863	Dimethicone copolyol	Goldsch
Abil Quat 3272	Quaternium-80	Goldsch
Abil Wax 2434	Stearoxy dimethicone	Goldsch
Abil WE-09	Polyglyceryl-4 isostearate & cetyl dimethicone copolyol & hexyl laurate	Goldsch
Abil 100	Dimethicone	Goldsch
Abil 350	Dimethicone	Goldsch
Acetulan	Cetyl acetate & acetylated lanolin alcohol	Amerch
Acritamer 941	Carbomer/thickener	Rita
Acrylates	C10-30 alkyl acrylate crosspolymer	
Actiphyte of Aloe Vera	Botanical extract	Active
Activera 104	Aloe vera gel	
Activera 106 Lipo M	Aloe extract	
Adol 66	Isostearyl alcohol	
Adriano 0/235970	Fragrance	Dragoco
Aerosil 200	Silica	Degussa
Aethoxal B	PPG-5 laureth-5	
Ajidew N-50	Sodium PCA	Ajinomo
Akogel	Hydrogenated vegetable oil	Jarchem
Akoice E	Hydrogenated vegetable oil	
Akoline MCM	Caprylic/capric glycerides	
Akomed R	Caprylic/capric triglycerides	
Akorex L	Hydrogenated canola oil	
Allantoin		Hoechst

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Almond Oil	Sweet almond oil	
Aloe-Vera (1:1)		Madis
Aloe Vera 200:1	Aloe barbadensis gel	
Aloe Vera Lipo-Quinone Extract		Terry
Alugel DF30	Aluminum hydroxide	Giulini
Amber Petrolatum	Petrolatum	Penreco
Amerchol CAB		Amerch
Amerchol L-101	Mineral oil (and) lanolin alcohol	Amerch
Amerlate P		Amerch
Amerlate W	Isopropyl lanolate	Amerch
Amidex C/CE/CME/CO-1/WD/1248		
Aminogluten MG		Croda
Amphisol	Cetyl phosphate & DEA cetyl phosphate	Givau
Amphisol K		Givau
Ampholyt JB130/K	Cocamidopropyl betaine	Huls
Amphomer 4910		NatStar
Amphosol CG	Cocamidopropyl betaine (35%)	Stepan
AMP-95	Aminomethyl propanol	Angus
Antil 141	Propylene glycol, PEG-55 propylene glycol oleate	Goldsch
Apricot Extract	Herbasol extract apricot	
Aquamollin BC pdr.h.c.	Ethylenediamine tetracetic acid sodium salt	Hoechst
Aquarez HS	Polymer emulsion. 41% solids	Eastman
Aras 0/221807	Fragrance	Dragoco

RAW MATERIAL	CHEMICAL DESCRIPTION	SOURCE
Aristoflex A60	VA/Crotonates copolymer, isopropanol	Hoechs
Arlacel C	Surfactant	ICI
Arlacel 40	Surfactant	ICI
Arlacel 60	Sorbitan monostearate	ICI
Arlacel 83	Sorbitan sesquioleate	ICI
Arlacel 165	Glyceryl stearate & PEG 100 stearate	ICI
Arlacel 989	PEG-7 hydrogenated castor oil	ICI
Arlamol E	PPG-15 stearyl ether	ICI
Arlamol HD	Isohexadecane	ICI
Arlamol M812	Emollient	ICI
Arlamol 801	Emollient	ICI
Arlasolve 200	Isoceteth-20 solubilizer	ICI
Arlatone 980	PEG-35-hydrogenated castor oil	ICI
Arlatone 985	Polyoxyethylene stearyl stearate	ICI
Arlatone 2121	Sunscreen agent	ICI
Arlypon F & FT	Laureth-2	Henkel
ASC III	Lecithin & etc	RonaMer
Atlas G-2330	Sorbeth-30	ICI
Avalure AC 118	Acrylates copolymer	
Avalure UR 450 & 445	Polymer	
Avocado Prills	Persea gratissima (Avocado oil)	Connock

RAW MATERIAL	CHEMICAL DESCRIPTION	SOURCE
Balance CR		NatStar
Balance Extra		NatStar
Balance 0/55		NatStar
Balance-47 (28-4947)		NatStar
Baysilon M350	Dimethicone	
Beauty 0/239870	Fragrance	Dragoco
Belsil DMC 6032	Dimethicone copolyol acetate	Wacker-
Bentone Gel EUG & LOI & MIO & TN & TNV	Rheological additives & VS-5 & VS-5PCV & EW & LT	Rheox
Bentone Paste SIL	Cyclomethicone & stearalkonium hectorite & SD Alcohol 40	Rheox
Benzophenone-3		Connock
Bienenwachs 8100	Cera alba (beeswax)	Henkel
Biocare SA	Serum albumin & hyaluronic acid & dextran sulfate	Amerch
Black Dragon II 0/232511	Fragrance	Dragoco
Boron Nitride 6069		
Brij 52	Ethoxylates surfactant	ICI
Brij 72	Steareth-2	ICI
Brij 78	Isosteareth-20	ICI
Brij 721 & 721S	Steareth-21	ICI
Bumyr	Butyl myristate	
Butoxyethanol	Glycol ether B	
Butyl Cellosolve	Solvent	UnionCa

RAW MATERIAL	CHEMICAL DESCRIPTION	SOURCE
C33-7715	Cosmetic Brown Iron oxides	
C33-7738	Cosmetic Russet	
C33-7773	Cosmetic Yellow	
C33-7775	Cosmetic Red	
C33-7734	Cosmetic Black	
Cab-O-Sil M-5	Fumed silica	Cabot
Calcium thioglycolate	trihydrate	Merck
Carbopol ETD 2001	Carbomer gelling agent	BFGood
Carbomer ETD 2020	Acrylates/C10-30 alkyl acrylate crosspolymer	BFGood
Carbopol Ultrez 10	Polymer	BFGood
Carbopol 934 & 940 & 941 & 980 & 981 & 1342 & 1382 & 2020 & 2984	Thickening agents	BFGood
Carbowax 400	PEG 400 lubricant	UnionCa
Carnauba Wax SP63		Strahl&
Castor Oil Crystal O	Ricinis communis	
Cellose HEC QP-52,000-H	Hydroxyethylcellulose	UnionCa
Cellose Polymer PCG-10	Hydroxyethylcellulose	UnionCa
Celquat SC-240	Polyquaternium-10 diluent	NatStar
Ceraphyl GA-D	Maleated soybean oil	ISPVanD
Ceraphyl ICA	Isocetyl alcohol	ISPVanD
Ceraphyl 31	Lauryl lactate	ISPVanD
Ceraphyl 45	Dioctyl malate	ISPVanD
Ceraphyl 50	Myristyl lactate	ISPVanD
Ceraphyl 230	Diisopropyl adipate	ISPVanD
Ceraphyl 368	Octyl palmitate	ISPVanD
Ceraphyl 424	Myristyl myristate	ISPVanD
Ceraphyl 494	Isocetyl stearate	ISPVanD

RAW MATERIAL	CHEMICAL DESCRIPTION	SOURCE
Ceraphyl 847	Octyldodecyl stearyl stearate	ISPVanD
Cerasol V		Pentaph
Cerasynt GMS	Glyceryl stearate	ISPVanD
Cerasynt SD	Glyceryl stearate	ISPVanD
Cerasynt 840	PEG-20 stearate	ISPVanD
Cerasynt 945	Glyceryl stearate	ISPVanD
Cetanol		Robeco
Cetina	Stearyl esters & stearamide DEA	Robeco
Cetiol	Oleyl oleate	Henkel
Cetiol A	Hexyl laurate	Henkel
Cetiol HE	PEG-7 glyceryl cocoate	Henkel
Cetiol J600	Oleyl erucate	Henkel
Cetiol LC	Coco-caprylate/caprates	Henkel
Cetiol MM	Emollient	Henkel
Cetiol OE	Dicaprylyl ether	Henkel
Cetiol PGL	Hexyldecanol & hexyldecyl laurate	Henkel
Cetiol S	Diethylcyclohexane	Henkel
Cetiol SB45	Shea butter	Henkel
Cetiol SN	Cetearyl isononanoate	Henkel
Cetiol V	Decyl oleate	Henkel
Cetiol 868	Octyl stearate emollient	Henkel
Cetyl Acetate (and)	Acetylated Lanolin Alcohol	Lanaet
CF1251	CF1251 Dimethicone	GESil
Chamomile Extract	Herbasol extract chamomile	
Chamomile Oil		Dragoco

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Chembetaine BW & C & CAS & CL & OL & OL-30 & S	Betaines	Chemron
Chemonix L-60		Chemron
Chemoxide CAW	Amine oxide	Chemron
Chemphos TC-227 & TC-310 & TX-625D	Phosphate esters	Chemron
Chemsperser EGDS	Ester & emulsifiers	Chemron
Cherry AG 6328	Fragrance	
Cherry Pit Oil		Connock
Citroflex-2	Plasticizer	Morflex
Cloisonne Super Gold	Cosmetic pearl powder in deep color	Mearl
CMC 7H3SF & CMC 7MXF & CMC 9M31F & CMC 12M31P	Carboxymethyl cellulose	Aqualon
Collagen CLR		Richter
Collagen KD		GFN
Colorona Imperial Red	Mica & titanium dioxide & D&CRed 30	Rona
Comperlan KD	Cocamide DEA	Henkel
Completech MBAC-EA & Completech VCB-SM-H		Lipo
Concentrate R		Cosmeto
Copherol F1250 & F1300	Tocopherols	Henkel
Corona PNL	Modified lanolin USP	Croda
Cosflor Awapuhi HGS & Cosflor Tea Tree HGS		
Cosmedia Guar C261	Guar hydroxypropyl trimonium chloride	Henkel
Cosmowax	Stearyl alcohol & steareth-20 & steareth-10	Croda
Cosmowax D	Cetearyl alcohol & ceteareth-20	Croda
Courage 0/243101	Fragrance	Dragoco

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
CreamJel		UnitedG
Cremophor A6	Ceteareth 6/stearyl alcohol	BASF
Cremophor A25	Ceteareth 25 surfactant	BASF
Cremophor EL	Hydrogenated castor oil	BASF
Cremophor GS 32	Polyglyceryl-3 distearate	BASF
Cremophor RH 40	PEG-40 Hydrogenated castor oil	BASF
Crodacol C-70 & C-90	Cetyl alcohols	Croda
Crodacol CS-50	Cetearyl alcohol	Croda
Crodafos CES	Cetearyl alcohol & dicetyl phosphate & ceteth-10 phosphate	Croda
Crodafos SG	PPG-5-ceteth-10 phosphate	Croda
Crodamol	Fatty acid ester	Croda
Crodamol DA	Diisopropyl adipate	Croda
Crodamol EHO	Oleyl oleate	Croda
Crodamol GTCC	Caprylic/capric triglyceride	Croda
Crodamol IPM	Isopropyl myristate	Croda
Crodamol MM	Myristyl myristate	Croda
Crodamol OPG	Octyl pelargonate	Croda
Crodamol OS	Octyl stearate	Croda
Crodasone W	Hydrolyzed wheat protein hydroxypropyl polysiloxane	Croda
Croderol GA 7000	Glycerin	Croda
Cromoist CM-Glucam	Sodium carboxymethyl B-glucam	Croda
Cromollient DP3A	Di-PPG-3 Myristyl ether adipate	Croda
Cropure Wheat Germ	Wheat germ oil	Croda
Crotein CAA SF	Proteins	Croda

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Crotein HKP SF & NDW	Proteins	Croda
Crothix	Penterythrityl tetrastearate	Croda
Crovol A-40	PEG-20 almond glycerides	Croda
Crovol PK-70	PEG-45 palm kernel glycerides	Croda
Cucumber Extract	Herbasol extract cucumber	Cosmeto
Cutavit Richter		Richter
Cutina CBS & FS25 & LM		Richter
Cutina GMS	Glyceryl stearate	Richter
Cyclomethicone DC 345		DowCorn
D&C Red #6 Barium Lake		Tricon
D&C Red #27 Aluminum Lake		Hilton
DC Surfactant 193	Dimethicone copolyol	DowCorn
DC 200 Fluid 2cSt	Dimethicone	DowCorn
DC 200 Fluid (350 cts)	Dimethicone	DowCorn
DC 344 Fluid	Cyclomethicone	DowCorn
Dehydrol LS3	Laureth-3	
Dehymuls E	W/O-emulsifier	Henkel
Dehymuls PGPH	Polyglyceryl-2 dipolyhydroxystearate	Henkel
Dehyquart L80	Dicocoylethyl hydroxyethylmonium methosulfate & propylene glycol	Henkel
Dehyton AB 30	Coco-betaine	Henkel
Dehyton K	Cocamidopropyl betaine	Henkel
Dehyton PK 45	Cocamidopropyl betaine	Henkel
Dermacide	Glycerin & lecithin & palmitoyl myristyl serinate	

RAW MATERIAL	CHEMICAL DESCRIPTION	SOURCE
Dermacryl LT	Acrylates/octylacrylamide copolymer	
Dermacryl-79	Film former	
Dermawhite HS		LabSer
Destressine 2000	Shea butter unsaponifiables &	
Diisostearyl Trimethylolpropane Siloxy Silicate		Connock
Dimethicone V100		Connock
Dipsal	Dipropylene glycol silicylate	Scher
Dow Corning Q2-1401		DowCorn
Dow Corning 193	Dimethicone copolyol	DowCorn
Dow Corning 200 Fluid 100 cst		DowCorn
Dow Corning 245 Fluid	Cyclomethicone	DowCorn
" " 344 Fluid	" "	
" " 435	" "	
Dow Corning 556 Fluid	Phenyl trimethicone	DowCorn
Dow Corning 1401	Cyclomethicone & dimethicol	DowCorn
Dow Corning 2501	Dimethicone copolyol	DowCorn
Dow Corning 3225C	Cyclomethicone & dimethiconol	DowCorn
Dowicil 200	Quaternium-15	Dow
D-Panthenol		Hoffman
Dragosantol	Bisabolol	Dragoco
Drakeol 7 & 9 & 21 & 35 & 500	Mineral oil	Penreco
DRN-20/232146	Fragrance	Dragoco
Duochrome RY	Iridescent color	Mearl
Dymel A & 152A	Dimethyl ethers	duPont
Dynacerin 660	Oleyl erucate	Huls
Dynasan 114	Trimyristin	Huls

RAW MATERIAL	CHEMICAL DESCRIPTION	SOURCE
Eashare		Pentap
Eastman AQ48 Ultra	Polymer	Eastman
Eastman AQ55S	Polymer	Eastman
Eastman Ethanol (SDA-40)		Eastman
Elfac I205	Octyldodecyl neo-pentanoate	Akzo
Elfacos C26	Hydroxyoctacosanyl hydroxystearate	Akzo
Elfacos E200	Methoxy PEG-22/Dodecyl glycol	Akzo
Elfacos GT282S	Hydrogenated talloweth-60 myristol glycol	Akzo
Elfacos ST9	PEG-45 dodecyl glycol copolymer	Akzo
Elhibin	Soy bean protein	
Emcol 4	Stearalkonium chloride	Witco
Emerest 2314 & 2316	Ester	Henkel
Emersol 132	Stearic acid	Henkel
Emersol 871	Isostearic acid	Henkel
Emery 916	Pure glycerine	Henkel
Emphos D70-30C	Sodium glyceryl oleate phosphate	Witco
Empical TL40T	TEA-lauryl sulfate	
Empigen BB	Lauryl betaine	
Emulgade F		Henkel
Emulgade PL68/50	Cetearyl glucoside, cetearyl alcohol	Henkel
Emulgade SE	O/W creambase SE	Henkel
Emulsifier E 2155	Stearyl alcohol & steareth-7 & steareth-10	
Emulsogen EL	PEG-36 castor oil	Hoechst
Epicutin-TT		Richter

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Epolene N-21	Polyethylene	Eastman
Escalol 507	Octyl dimethyl PABA	ISPVand
Escalol 557	Octyl methoxycinnamate	ISPVand
Escalol 567	Benzophenone-3	ISPVand
Escalol 587	Octyl salicylate	ISPVand
Estol 1514	Isopropyl myristate	Unichem
Estol 1526	Propylene glycol dicaprylate/ dicaprate	Unichem
Estol 1527	Caprylic/capric triglyceride	Unichem
Ethylflo 362NF-Albermarle	Polydecene	
Eumulgin B2 Flakes	Cetareth-20	Henkel
Eumulgin VL25	Cosmetic emulsifier o/w	Henkel
Euperlan PK1200	Coco-glucoside & glycol distearate & glycerin	Henkel
Euperlan PK3000AM	Glycol distearate & laureth-4 & cocamidopropyl betaine	Henkel
Eusolex OCR	Octocrylene	Rona/EM
Eusolex T2000	Micron titanium dioxide	Rona/EM
Eusolex 232	Phenylbenzimidazole sulfonic acid	Rona/EM
Eusolex 4360	Benzophenone-3	Rona/EM
Eusolex 6300	4-methylbenzylidene camphor	Rona/EM
Eusolex 8020	Isopropyl dibenzoylmethane	Rona/EM
Eusolex 9020	Butyl methoxydibenzoylmethane	Rona/EM
Eutanol G	Octyldodecanol	Henkel
Eutanol G-16	Isocetyl alcohol	Henkel
Euxyl K400	Methyldibromoglutaronitrile & phenoxyethanol	

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Extrapon Biopollin	Spezial plant extract	Dragoco
Extrapon Chamomile	Spezial	Dragoco
Extrapon Henna		Dragoco
Extrapon Kamille	Spezial	Dragoco
Extrapon Phytostimulin	Spezial	Dragoco
Extrapone Witch Hazel	plant extract	Dragoco
Fancol IPL		Fanning
FD&C Red #40	Aluminum Lake	Hilton
FD&C Yellow #5	Aluminum Lake	Tricon
FG-10 Antifoam Emulsion	Simethicone	
Finsolv TN	C12-15 Alcohols benzoate	Finetex
Fitobroside	Wheat germ extract	Pentap
Fitoderm	Squalane	Pentap
Flamenco Ultrasilk 2500	Pearl pigment	Mearl
Floral Gardenia Fragrance 169-724	perfume	Alpine
Fragrance HB-635	Perfume	ShawMu
Fragrance HJ-416	Perfume	ShawMu
Fragrance J6-712-A	Perfume	Bell
Fragrance J-6636	Perfume	Bell
Fragrance Pina Colada	Perfume	Robert
Fragrance Q-14662	Perfume	
Fragrance TC-726	Perfume	
Fragrance #830079	Perfume	ShawMu
Fragrance #99189 "Twister"	Perfume	Drom

RAW MATERIALS G-2330 & G-4822	CHEMICAL DESCRIPTION	SOURCE
Gafquat 755	Cationic copolymer	ISP
Ganex V-220	PVP/Eicosene copolymer	ISPSutt
Ganex WP-660	Tricontanyl PVP	ISPSutt
Genagen CA-050	PEG-5 Cocamide	Hoechst
Genagen CAB	Cocamidopropyl betaine	Hoechst
Genagen CAB 818	Cocamidopropyl betaine	Hoechst
Genamin CTAC	Cetrimonium chloride	Hoechst
Genamin DSAC	Distearyldimonium chloride	Hoechst
Genamin EQ	Distearoylethyl dimonium chloride	Hoechst
Genamin KDMP	Behentrimonium chloride	Hoechst
Genamin KSL	PEG-5 stearyl ammonium lactate	Hoechst
Genamin STACP	Steartrimonium chloride	Hoechst
Genamin AMS	TEA-PEG-3 cocamide sulfate	Hoechst
Genapol L-3	Laureth-3	Hoechst
Genapol LRO	Sodium laureth sulfate	Hoechst
Genapol PGL	Glycol distearate, cocamide MEA, PPG-4-deceth-4	Hoechst
Genapol PGM	Sodium laureth sulfate, glycol distearate, cocamide MEA	Hoechst
Genapol PNG	Behenic acid, sodium laureth sulfate, sodium cocoyl isethionate	Hoechst
Genapol SBE	Disodium laureth sulfosuccinate	Hoechst
Genapol TSM	PEG-3 distearate, sodium laureth sulfate	Hoechst
Genapol ZRO liquid	Sodium laureth sulfate	Hoechst
Germaben II & II-E	Cosmetic preservatives	ISPSutt

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Germall Plus & II	Diazolidinyl ureas	ISPSutt
Germall 115	Imidazolidinyl urea	ISPSutt
Geropon SBL-203	Disodium lauramide (MEA) sulfosuccinate	Rhodia
Ginseng Extract		Cosmet
Gludin Almond	Hydrolyzed sweet almond protein	Henkel
Gludin WP	Hydrolyzed wheat protein	Henkel
Gludin WQ	Laurdimonium hydroxypropyl hydrolyzed wheat protein	Henkel
Glucam E10	Methyl gluceth-10	Amerch
Glucam E20 Distearate	Methyl gluceth-20 distearate	Amerch
Glucam P-10	PPG-10 methyl glucose ether	Amerch
Glucamate DOE 120	PEG-120 Methyl glucose dioleate	Amerch
Glucamate SSE 20	PEG-20 Methyl glucose	Amerch
Glucate DO	Methyl glucose dioleate	Amerch
Glucate SS	Methyl glucose sesquistearate	Amerch
Glycerine BP		
Glycerox HE	PEG-7 glycerox cocoate	
Glycoderm (P)		Richter
Glydant Plus	DMDM hydantoin & iodopropynyl butylcarbamate	Lonza
GMS A/S	Glyceryl stearate & PEG-100	Croda
GMS N/E & GMS SE	Glyceryl stearates	Croda
Gorgonian Extract	Butylene glycol & seawhip extract *Patented	Lipo
Grapeseed Oil		Polyest

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Hampene Na2T	Disodium EDTA	Hampshi
Hampene Na3T	Tetrasodium EDTA	Hampshi
Hampene 220	Tetrasodium EDTA	Hampshi
Hamosyl C-30	Fatty acid sarcosinate	Hampshi
Herbasol Extract Apricot		Cosmet
Herbasol Extract Chamomile		Cosmet
Herbasol Extract Cucumber		Cosmet
Herbasol Extract Wheat Germ		Cosmet
Hombitec L5	Micronized titanium dioxide	FaSacht
Hostacerin DGI	Polyglyceryl-2 sesquiisostearate	Hoechst
Hostacerin DGL	Polyglyceryl-2 PEG-10 laurate	Hoechst
Hostacerin DGMS	Polyglyceryl-2 stearate	Hoechst
Hostacerin DGSB	Polyglyceryl-2 PEG-4 Stearate	Hoechst
Hostacerin T-3	Ceteareth-3	Hoechst
Hostacerin WO	Polyglyceryl-2 sesquiisostearate...	Hoechst
Hostaphat CG120	Isostearyl phosphate	Hoechst
Hostaphat KL 340N	Trilaureth-4 phosphate	Hoechst
Hostaphat KML	Laureth-4 phosphate, polyglyceryl-2 sesquiisostearate	Hoechst
Hostaphat KW 340N	Triceteareth-4 phosphate	Hoechst
Hostapon CT Paste	Sodium methyl cocoyl taurate	Hoechst
Hostapon KCG	Sodium cocoyl glutamate	Hoechst
Hostapon SCID	Sodium cocoyl isethionate	Hoechst
Hostapur SAS 60	Sodium C14-17 sec alkyl sulfonate	Hoechst
HTL MYP Hyaluronic Acid		
Hyasol-BT	Sodium hyaluronate	Pentaph

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Hydagen B	Bisabolol	Henkel
Hydagen CMF	Chitosan glycolate	Henkel
Hydrolupin AA	Lupin amino acids	
Hydrosesame AA	Sesame seed amino acids	Croda
Hydrotritricum QM	Cocodimonium hydroxypropyl hydro- lyzed wheat protein	Croda
Hydrotritricum WAA	Wheat amino acids	Croda
Hydroxyoctacosanyl Hydroxystearate		Connock
Hygroplex HHG	Moisture factor	Richter
Hyladerm	Hyaluronic acid	Amerch
Hylucare	Hyaluronic acid	
Hypan SA100H	Acrylic acid/acrylonitrogens copolymer	
H2OLD EP-1		ISP
Imwitor 370	Glyceryl stearate citrate	Huls
Imwitor 375	Glyceryl citrate/lactate/linoleate/ oleate	Huls
Imwitor 377	Glyceryl laurate/citrate/lactate	Huls
Imwitor 380	Glyceryl cocoate/citrate/lactate	Huls
Imwitor 780K	Isostearyl diglyceryl succinate	Huls
Imwitor 900	Glyceryl stearate	Huls
Imwitor 928	Glyceryl cocoate	Huls
Imwitor 960 flakes	Glyceryl stearate SE	Huls
Incromectant LAMEA	Acetamide MEA & lactamide MEA	Croda
Incromide LR	Lauramide DEA	Croda
Incromine Oxide C	Cocamidopropylamine oxide	Croda

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Incronam 30	Cocamidopropyl betaine	Croda
Incroquat Behenyl HE	Behenamidopropyl hydroxyethyl dimonium chloride	Croda
Incroquat Behenyl TMS	Behentrimonium methosulfate & cetearyl alcohol	Croda
Incroquat CTC-30	Cetrimonium chloride	Croda
Incroquat Erucyl HE	Hydroxyethyl erucamidopropyl dimonium chloride	Croda
Incroquat HO-80PG	Dioleoylamidoethyl hydroxyethylmonium methosulfate	Croda
Incroquat UV-283	Cinnamidopropyltrimonium chloride	Croda
Indinyl CA	Cassia augustifolia seed polysaccharides	LabSero
Indopol H100	Polybutene	Amoco
Insect Repellent 3535	Ethyl butylacetylaminopropionate	MGK
Irgasan D9300	Triclosan	Ciba
Irgasan DP300	Triclosan	Ciba
Iricalmin	Water, wheat germ extract,.....	
Iron Oxide Black #C-UR2500		
Iron Oxide Red #C-UR1800		
Iron Oxide Yellow #C-UR0200		
Iron Oxide, Red C33-8075		
Iron Oxide, Yellow C33-8073		
Iron Oxide, Black C33-134		
Iron Oxide Brown 7061		Whittak
Iron Oxide Red 7054		Whittak
Iron Oxide Yellow 7055		Whittak
Iso-Adipate	Diisopropyl adipate	Dragoco
Isobeeswax SP154	Beeswax & candelilla wax &.....	Strahl
Isopar H	Isoparaffin solvent	Exxon
Ivarlan 3100	Lanolin oil	

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Jaguar C-13S & C-162	Guar hydroxypropyltrimonium chloride	RhoneP
Jarcol I-20	Octyldodecanol	Jarchem
Jojoba Wax Prills		Connock
Kaolin 2457		
Karion F	Sorbitol	EMerck
Katemul IGU-70	Isostearamidopropyl dimethylamine gluconate	Scher
Kathon & Kathon CG	Methylchloroisothiazolinone & methylisothiazolinone	Rohm&
Kaya EV 2940	Fragrance	Essenci
Kelco BT	Xanthan gum	Nutrasw
Kelcoloid S	Propylene glycol alginate	Nutrasw
Keltrol & Keltrol F	Xanthan gum	Nutrasw
Keltrol Gel	Hydrogel based on xanthan	Nutrasw
Kelzan S	Xanthan gum	Nutrasw
Kessco Glyceryl Monostearate		Stepan
Klearol	Mineral oil	Witco
Kytamer PC	Chitosan PCA	Amerch
Lactil	Sodium lactate & sodium PCA &	Goldsch
Lactokine Fluid		Richter
Lameform TGI	Polyglyceryl-3 diisostearate	Henkel
Lamepon S	Potassium cocoyl hydrolyzed collagen	Henkel
Lamesoft PO65	Coco-glucoside & glyceryl oleate	Henkel
Lamesoft PW45	Lipid layer enhancer	Henkel

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Lanapene		Lanaete
Lan-Aqua-Sol 50 & 75		
Lanette O	Cetearyl alcohol	Henkel
Lanette 16	Cetyl alcohol	Henkel
Lanfrax	Lanolin wax	Henkel
Lanodent DM	DMDM hydantoin preservative	
Lanogene		
Lanolin USP X-Tra Deo Emollient		Rita
Lily White Petrolatum Moisturizer		
Lipamide LMEA	Lactamide MEA	Lipo
Lipamide MEAA	Acetamide MEA	Lipo
Lipex Canola-U	Canola oil unsaponfiabiles	Jarchem
Lipex Shea-U	Shea butter unsaponfiabiles	Jarchem
Lipex 106 E75-50%	PEG-75 Illipe butter glycerides	Jarchem
Lipex 120	Canola oil	Jarchem
Lipex 203	Mango seed oil	Jarchem
Lipex 203 E70-50%	PEG-70 mango seed glycerides	Jarchem
Lipex 403	Hydrogenated palm kernel oil	Jarchem
Lipex 408	Hydrogenated vegetable oil	Jarchem
Lipex 512	Shea butter	Jarchem
Lipo CD-SA		Lipo
Lipocol C	Cetyl alcohol	Lipo
Lipo GMS-450	Glyceryl stearate	Lipo
Lipo GMS-470	Glyceryl stearate SE	Lipo
Lipolan Distilled	Lanolin derivative	Lipo

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Lipo Lecithin		Lipo
Liponic 601 BN	Mica & boron nitride	Lipo
Lipomulse 165	Glyceryl stearate & PEG-100 stearate	Lipo
Liponate IPP	Isopropyl palmitate	Lipo
Liponate NPGC-2	Neopentyl glycol dicaprylate/ dicaprinate	Lipo
Liponate PS-4	Pentaerythrityl tetrastearate	Lipo
Liponate TDTM	Tridecyl trimellitate	Lipo
Liponate 2DH	PEG-4 diheptanoate	Lipo
Liponic EG-1	Glycereth-26	Lipo
Lipopeg 100-S	Polyoxyethylene fatty acid esters	Lipo
Lipopeg 6000 DS	PEG-150 distearate	Lipo
Lipoquat R	Ricinoleamidopropyl ethyldimonium ethosulfate	Lipo
Liposilt Black	Silt	Lipo
Liposilt Green	Silt	Lipo
Liposorb O-20	Polysorbate 80	Lipo
Liposorb S	Sorbitan ester	Lipo
Lipo Stearic Acid		Lipo
Lipovol A	Avocado oil	Lipo
Lipovol CO	Castor oil	Lipo
Lipovol G	Grape seed oil	Lipo
Lipovol J	Jojoba oil	Lipo
Lipovol MAC	Macademia ternifolia nut oil	Lipo
Lipovol SAF	Safflower oil	Lipo
Lipovol SES	Sesame oil	Lipo

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Lipovol WGO	Wheat germ oil	Lipo
Lipowax D	Cetearyl alcohol & ceteareth-20	Lipo
Lipowax G	Stearyl alcohol & ceteareth-20	Lipo
Lipowax P	Cetearyl alcohol & polysorbate 60	Lipo
Liquapar Oil	Paraben preservative	ISPSut
Liquid Crystal CN/G9		Presper
Locron L	Al-hydroxide chloride	Hoechst
Locron P	Aluminum chlorhydrate	Hoechst
Lonza G-100	Glycerin	Lonza
Lovocryl 47		NatStar
Lubrajel CG & DV & MS & Oil & TW	Lubricating jelly	UnitedG
Lunacera M & P	Microwaxes	Fuller
Luviskol VA64	PVA-VA copolymer	BASF
Luviskol VA64I	PVA-VA copolymer, Isopropyl alcohol	BASF
Luvitol EHO	Cetearyl octanoate	BASF
Mackadet BBC	Disodium laureth sulfosuccinate & sodium laureth sulfate	McIntyr
Mackadet BSC	Baby shampoo concentrate	McIntyr
Mackadet BW-173	Sodium lauryl sulfate & cocamide DEA & cocamidopropyl betaine	McIntyr
Mackadet CA	Sodium laureth sulfate & sodium ...	McIntyr
Mackadet CBC	Conditioner concentrate	McIntyr
Mackadet INC	Conditioner concentrate	McIntyr
Mackadet LCB	Liquid conditioner concentrate for cold blending	McIntyr

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Mackadet SBC-8	Mild shampoo blend	McIntyr
Mackadet WGS	"Animal-free" shampoo blend	McIntyr
Mackadet 40-K	Potassium cocoate	McIntyr
Mackalene NLC	Oleamidopropyl dimethylamine lactate &	McIntyr
Mackalene 116	Cocamidopropyl dimethylamine lactate	McIntyr
Mackalene 316	Stearamidopropyl dimethylamine lactate	McIntyr
Mackalene 326	Stearamidopropyl morpholine lactate	McIntyr
Mackalene 426	Isostearamidopropyl morpholine lactate	McIntyr
Mackalene 716	Wheatgermamidopropyl dimethylamine lactate	McIntyr
Mackam CB	Coco betaine	McIntyr
Mackam CET	Cetyl betaine	McIntyr
Mackam HPC-32	Sodium cocoamphoacetate	McIntyr
Mackam WGB	Wheatgermamidopropyl betaine	McIntyr
Mackam 2C	Cocoamphodiacetate	McIntyr
Mackam 2CY-75	Disodium capryloamphodiacetate	McIntyr
Mackam 2S	Disodium soyamphodiacetate	McIntyr
Mackam 35&35HP&35UL	Cocamidopropyl betaine	McIntyr
Mackamide AME-100 & AME-75	Acetamide MEA	McIntyr
Mackamide C & CMA & CS	Cocamide DEA	McIntyr
Mackamide L-10 & LLM & LMD	Lauramide DEA	McIntyr
Mackamide PKM	Palmkernelamide MEA	McIntyr
Mackamide S	Soyamide DEA	McIntyr

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Mackamine CAO	Cocamidopropylamine oxide	McIntyr
Mackamine WGO	Wheatgermamidopropylamine oxide	McIntyr
Mackanate CP	Disodium cocamide MIPA sulfo- succinate	McIntyr
Mackanate DC-30	Disodium dimethicone copolyol sulfosuccinate (30%)	McIntyr
Mackanate EL	Disodium laureth sulfosuccinate	McIntyr
Mackanate LA	Diammonium lauryl sulfosuccinate	McIntyr
Mackanate LO & LO- Special	Disodium lauryl sulfosuccinate	McIntyr
Mackanate NLP	Disodium cocamide MIPA sulfo- succinate	McIntyr
Mackanate OM	Disodium oleamido MEA sulfo- succinate	McIntyr
Mackanate OP & OPS	Disodium oleamido MIPA sulfo- succinate	McIntyr
Mackanate WGD	Wheatgermamido PEG-2 sulfocuccinate	McIntyr
Mackernium SDC-25 & SDC-85	Stearalkonium chloride	McIntyr
Mackernium 007	Polyquaternium-7	McIntyr
Mackester EGDS	Glycol distearate	McIntyr
Mackester EGMS	Glycol stearate	McIntyr
Mackester SP	Glycol stearate & stearamide MEA	McIntyr
Mackine 301	Stearamidopropyl dimethylamine	McIntyr
Mackol 70NS	Sodium laureth sulfate-70%	McIntyr
Mackpearl 202	Pearling agent	McIntyr
Mackpro NLP	Quaternium-79 hydrolyzed collagen	McIntyr
Mackpro NSP	Oleyl/palmityl/palmitoleamido- propyl/silkhydroxypropyl dimonium chloride	McIntyr

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Mackpro WLW	Wheatgermamidopropyl hydroxypropyl dimonium hydrolyzed wheat protein	McIntyr
Mackpro WWP	Wheatgermamidopropyl dimethylamine hydrolyzed wheat protein	McIntyr
Mackstat DM	DMDM hydantoin	McIntyr
Mackstat SBC-8	Mild shampoo blend	McIntyr
Magnesium Aluminum Silicate		Vander
Mag Sulphate BP Super Pearl		
Maltrin MO40	Maltodextrin	GrainPr
Mariscan	Glycoamionglycans	
Marlamid DF1218	Cocamide DEA	Huls
Marlinat CM100	Laureth-11 carboxylic acid	Huls
Marlinat CM105	Sodium laureth-11 carboxylate	Huls
Marlinat 242/28	Sodium laureth sulphate	Huls
Marlipal 1618/25	Ceteareth-25	Huls
Mazon EE-1	Benzyl laurate	PPG
Mearlite GBU	Synthetic pearl pigment	Engelha
Mearl Mica SVA	Cosmetic mica powder	Engelha
Mearl Talc TCA	Treated cosmetic talc	Engelha
Medialan LD	Sodium lauroyl sarcosinate	Hoechst
Merquat 550	Polyquaternium-7	Calgon
Merquat Plus 3330	Polyquaternium-39	Calgon
Methocel E4M & FYM & 40-202	Hydroxypropyl methyl cellulose	Dow
Methoxy PEG 22 Dodecylglycol Copolymer		Connock
Micro LA20	Titanium dioxide	Grant

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Micro Titanium Dioxide	MT-100T & MT-150W	
Miglyol Gel B	Caprylic/capric triglyceride & ...	Huls
Miglyol 810 & 812	Caprylic/capric triglyceride	Huls
Miglyol 818	Caprylic/capric/linoleic triglyceride	Huls
Miglyol 829	Caprylic/capric/succinic triglyceride	Huls
Miglyol 840	Propylene glycol dicaprylate/dicaprate	Huls
Miglyol 840-Gel B	Propylene glycol dicaprylate/dicaprate & stearylalkonium....	Huls
Milfoil Extract		Kelisem
Mineral Colloid BP	Montmorillonite	ECCAmer
Mineral Oil #35		Penreco
Mirasil SM	Simethicone	RhonePo
Modulan	Acetylated lanolin	Amerch
Monamid 150 ADD	Super fatty alkanolamide	Mona
Monomuls 60-35C Pdr	Hydrogenated palm glycerides	Henkel
Monawet MO-70R	Wetting agent	Mona
Monawet MO85P	Sodium dioctylsulfosuccinate	Mona
Mowiol 10-98	Polyvinyl alcohol copolymer	Hoechst
Multiwax W445	Microcrystalline wax	Witco
Myracet 9-45	Distilled acetylated monoglyceride	
Myratex Texture Lite	Emulsifier	Henkel
Myritol PC	Propylene glycol dicaprylate/dicaprate	Henkel
Myritol 318	Caprylic/capric triglyceride	Henkel

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Myritol 331	Cocoglycerides	Henkel
Myrj 52S	PEG-40 stearate	ICI
Myverol 18-06 Monoglyceride		
Nalidene 50	Sodium PCA	
Nanox	Zinc oxide	Rheox
Natrosol 250 HHR	Hydroxyethylcellulose thickener	Aqualon
Neo Heliopan AV	Octyl methoxycinnamate	Haarman
Neo Heliopan BB	Benzophenone-3	Haarman
Neo Heliopan Type DS	Octyl salicylate	Haarman
Neo Heliopan E 1000	Isoamyl p-methoxycinnamate	Haarman
Nimlesterol D	Mineral oil	Malmstr
Ninol 2012 Extra	Alkylolamide	Stepan
Non-Fat Dry Milk		Carnati
Novarome NC-46/NC-48	Fragrance	
Number One 908 CK	Fragrance	
Nuosept C	Polymethoxy bicyclic oxazolidine	Huls
Nutrilan I	Collagen	Henkel
Octopirox	Piroctone olamine	Hoechst
Ohlan		
Oil of Orchids (OS) (WS)		UnitedG
Orgasol 2002D Nat Cos	Nylon-12	Lipo
Oxynex K Liquid	PEG-8 & Tocopherol & Ascorbyl...	Zschimm
Ozokerite FFW	Ozokerite	Ross
Ozokerite Wax White SP 1020		Strahl

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Panacete 810	Vegetable oil	
Panalane L14E	Hydrogenated polyisobutene	Amoco
Panthenol 50P	D-Panthenol	BASF
Paraffin Oil Liquid	Mineral oil	
Paragon	Propylene glycol & DMDM hydantoin & Methylparaben	McIntyr
Paragon II	Propylene glycol & DMDM hydantoin & methylparaben & propylparaben	McIntyr
Paragon III	Phenoxyethanol & DMDM hydantoin & methylparaben & propylparaben	McIntyr
Parfex 52255	Fragrance	Givaud
Parsol		Givaud
Parsol MCX	Octyl methoxycinnamate	Givaud
Parsol 1789	Butyl methoxydibenzoylmethane	Givaud
Pationic SBL	Sodium behenoyl lactylate	Rita
Pationic SCL	Sodium cocoyl lactylate	Rita
Pationic SSL	Sodium stearoyl lactylate	Rita
PCL-Liquid	Synthetic rump fat	Dragoco
PCL-Solid	Stearyl heptanoate, stearyl caprylate	Dragoco
Pearl Pigments	Timirona starlight colors, Colorona bronze sparkle, Timiron MP-149	Rona
PEG-20 Almond Glycerides	Emollient/solubilizer	Croda
PEG 45 Dodecylglycol Copolymer		Connock
PEG-120 Jojoba Acid & PEG-120 Jojoba Alcohol		IntFlor
PEG-150 Pentaerythrityl Tetrastearate		Croda
PEG-400	PEG-8	Hoechst

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
PEG 600		UnionCa
PEG-800	Polyethylene glycol-16	ICI
Pelemol CA	Cetyl acetate	
Pemulen TR-1 & TR-2	Acrylates/C10-30 alkyl acrylate crosspolymer	BFGood
Pentacare HP	Water, locust bean gum, hydrolyzed casein	
Pentavitin	Saccharide isomerate	Pentap
Peppermint Oil RM-116		
Perluoromethylisopropyl Ether film former		Ausimon
Perf. Rainforest	Perf. compound	AustAr
Perfume 72979		
Permulin 4101	Co-emulsifier	Keunen
Permulin 4200	Microcrystalline wax	Keunen
Phenonip	Esters of p-hydroxybenzoic acid	NipaHar
Phytaluronate	Locust bean gum	
Phytoderm Complex G	Propylene glycol & Licorice extract	Cosmeto
Pineapple Flavor 4-430	flavoring	Glidco
Pionier WWH salt	Ointment base	Hansen&
Placentaliquid, aqueous		Richter
Plantacare PS10	Sodium laureth sulfate & lauryl glucoside	Henkel
Plantacare 818 & 818 UP	Coco glucoside	Henkel
Plantacare 1200 UP	Lauryl glucoside	Henkel
Plurol Stearique	Polyglyceryl-6 distearate	Gattef
PNC 400	Sodium carbomer	3VGmbH

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Polawax	Emulsifying wax	Croda
Polawax GP200	Nonionic emulsifying wax	Croda
Polychol 5	Ethoxylated lanolin alcohol	Croda
Polyethylene Glycol 400/PEG-8		
Polyethylene Glycol 1500/PEG-30		
Polajel		UnitedG
Polymer JR400	Polyquaternium-10	Amercho
Polysorbate 20		Connock
Polysorbate 80		Protame
Polysynlane	Hydrogenated polyisobutene	Polyest
Povidern SK3	Polyvinylpyrrolidone	ISP
Preregen	Soybean (glycine soya) protein, oxide reductases	Pentaph
Prisorine 2021	Isopropyl isostearate	Unichem
Prisorine 2039	Isostearyl isostearate	Unichem
Prisorine 3630	Trimethylolpropane triisostearate	Unichem
Prisorine 3631	Pentaerythritol tetraisostearate	Unichem
Promulgen D	Cetearyl alcohol, ceteareth-20	Amercho
Promulgen G	Stearyl alcohol, ceteareth-20	Amercho
Propal	Isopropyl palmitate	Amercho
Propanediol-1,2	Propylene glycol	
Protachem GL-26	Glycereth-26	
Protachem GMS-450	Glyceryl stearate	
Protachem IPP	Isopropyl palmitate	
Provitamin B	Panthenol	

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Purac HiPure 88	Lactic acid	Purac
Purac PF P/41 & PH90	Lactic acid	Purac
Purasal S HiPure 60	Lactate-sodium	Purac
Purasal S/HQ 60	Lactate-sodium	Purac
Purasal S/PF 60	Sodium lactate (60%)	Purac
Purasal S/PF 90	Sodium lactate	Purac
PVP-K30		
PVP/VA E335		
Quatrex S	Quaternary ammonium compound	Chemron
Quickpearl II		
Raffermine	Hydrolyzed soy flour	
Refined Jojoba Oil	Jojoba oil	
Regent Petrolatum	Petrolatum	
Resyn 26-1314	Polyvinyl acetate	NatStar
Resyn 28-2930	Polyvinyl acetate	NatStar
Retinyl Palmitate		Hoffman
Revitalin-BT	Glyco proteins	
Rezal 36 GP	Aluminum zirconium tetrachloro-hydrate GLY	Reheis
Rhodacal A246/L	Sodium C14-16 olefin sulfonate	Rhone-
Rita Cetearyl Alcohol		Rita
Rita Cetearyl Alcohol	50/50 emulsifier	Rita
Ritachol	Mineral oil & lanolin alcohol	Rita
Ritachol SS	Stearyl stearate	Rita

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Rita EGMS	Glycol stearate/emulsifier	Rita
Rita Glycerine	Humectant	Rita
Rita GMS	Glyceryl stearate/emulsifier	Rita
Rita HA C-I-C	Sodium hyaluronate	Rita
Rita IPP	Isopropyl palmitate/emollient	Rita
Ritalan	Lanolin oil/emollient	Rita
Ritaloe 20X	Aloe vera/moisturizer	Rita
Ritaloe 200M	Aloe vera gel/moisturizer	Rita
Ritamectant PCA	Sodium PCA/moisturizer	Rita
Rita Methylparaben	Preservative	Rita
Rita Propylparaben	Preservative	Rita
Ritasil 190	Dimethicone copolyol lubricant	Rita
Ritasol	Isopropanol lanolate/emollient	Rita
Rita SSO	Sunflower seed oil/emollient	Rita
Ritoleth-10	Oleth-10	
Rivalia 0/221212	Fragrance	
Robane	Squalane NF	Robeco
Rose Extract		Cosmet
Rose Fragrance 34844		Alpine
Ross Microcrystalline Wax 1275W & 1275WH & 1329/1		Ross
Ross Ozokerite Wax 77W		Ross
Ross Refined Candelilla Wax		Ross
Ross Refined #1 Yellow Carnauba Wax		Ross
Ross Spermaceti Wax Substitute		Ross

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Ross Spermaceti Wax Sub. 573		Ross
Rosswax 63-0412		Ross
Rosswax 2540		Ross
Ross White Bleached Beeswax		Ross
Rovisome-AHA	Sodium lactate & alcohol & lecithin/ liposome	
Safester A-75		Induche
Sandhill 4028	Fragrance	Essenci
Schercamox CAA-G(35%)	Disodium oleamido PEG-2 sulfo- succinate	Scher
Schercemol BE	Behenyl erucate	Scher
Schercemol CO	Cetyl octanoate	Scher
Schercemol DIA	Diisopropyl adipate	Scher
Schercemol DID	Diisopropyl dimer dilinoleate	Scher
Schercemol DIS	Diisopropyl sebacate	Scher
Schercemol DISD	Diisostearyl dimer dilinoleate	Scher
Schercemol GMIS	Glyceryl monoisostearate	Scher
Schercemol IDO	Isodecyl oleate	Scher
Schercemol Mel-3	Myreth-3 laurate	Scher
Schercemol Mel-9	Myreth-9 laurate	Scher
Schercemol MM	Myristyl myristate	Scher
Schercemol NGDC	Neopentyl glycol dicaprato	Scher
Schercemol NGDO	Neopentyl glycol dioctanoate	Scher
Schercemol PEG 400DS	PEG 8 distearate	Scher
Schercemol PGMS	Propylene glycol stearate	Scher

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Schercemol TISC	Triisostearyl citrate	Scher
Schercemol TIST	Triisostearyl trimerate	Scher
Schercemol 185	Isostearyl neopentanoate	Scher
Schercemol 318	Isopropyl isostearate	Scher
Schercomid AME-70	Acetamide MEA	Scher
Schercomid AME-100	Acetamide MEA	Scher
Schercomid LME-75	Lactamide MEA	Scher
Schercomid SAP	Apricot kernel DEA	Scher
Schercomid SCO-EX	Cocamide DEA	Scher
Schercomid SLM-LC	Lauramide DEA	Scher
Schercomid SL-ML	Lauramide DEA	Scher
Schercomid SWG	Wheat germ diethanolamide	Scher
Schercopol DOS-70	Dioctyl sodium sulfosuccinate	Scher
Schercopol OMES-Na (35%)	Disodium oleamido PEG-2 sulfosuccinate	Scher
Schercopol OMS-Na(35%)	Disodium oleamido MEA sulfosuccinate	Scher
Schercoquat ALA	Di-lauryl acetyl dimonium chloride	Scher
Schercoquat APAS(90%)	Apricotamidopropyl ethyldimonium ethosulfate	Scher
Schercoquat DAS	Quaternium-61	Scher
Schercoquat IALA	Isostearamidopropyl laurylaceto- dimonium chloride	Scher
Schercoquat IAS & IAS-LC	Isostearamidopropyl ethyl dimonium ethosulfate	Scher
Schercoquat SOAS	Soyamidopropyl ethyldimonium	Scher
Schercoquat WOAS	Wheat germ amidopropyl ethyldi- monium ethosulfate	Scher

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Schercoquat IIS-LC	Isostearyl ethyl imidonium etho-sulfate	Scher
Schercotaine APAB	Apricotamidopropyl betaine	Scher
Schercotaine CAB-G	Cocamidopropyl betaine	Scher
Schercotaine CAB-Z	Cocamidopropyl betaine-zinc	Scher
Schercotaine SCAB-G	Cocamidopropyl hydroxy sultaine	Scher
Schercotaine UAB	Bis(Undecylenic amidopropyl dimethyl glycine)	Scher
Schercotaine WOAB	Wheat germ amidopropyl betaine	Scher
Sepiegel 305	Thickener	Seppic
Sericin		Pentaph
Sericite GMS-4C	Mica	
Sesame Oil		Polyest
SF-96	Dimethicone emollient	GESil
SF1173 Silicone	Cyclotetrasiloxane	GESil
SF1188A Silicone	Dimethicone copolyol	GESil
SF1202 Silicone	Cyclopentasiloxane	GESil
SF1204 Silicone	Cyclomethicone	GESil
SF1214 Silicone	Cyclopentasiloxane & dimethicone	GESil
SF1236 Silicone	SF1236 dimethicone	GESil
SF1276 Silicone	SF1276 dimethicone	GESil
SF1288 Silicone	Dimethicone copolyol	GESil
SF1318 Silicone	Diisostearyl trimethylolpropane siloxy silicate	GESil
SF1328 Silicone	Cyclomethicone & dimethicone copolyol	GESil
SF1528 Silicone	Cyclopentasiloxane & dimethicone copolyol	GESil

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
SF1550 Silicone	Phenyl trimethicone	GESil
SF1555 Silicone	Bis-phenylpropyl dimethicone	GESil
SF1632 Silicone	Cetearyl methicone	GESil
SF1642 Silicone	C30-45 alkyl dimethicone	GESil
SF1708 Amine Silicone	Trimethylsilylamodimenthicone	GESil
SFE839 Elastomer Disp	Cyclopentasiloxane & dimethicone/ vinyl dimethicone crosspolymer	GESil
Shebu Refined	Shea butter/emollient	
Shinju 100T White	Synthetic pearl pigment	Mearl
Sicovit Patentblau 85	E131: C.I. 42051/Acid Blue 3	
Silikonol AK350		Wacker
Silicon Oil AK500	Dimethicone	Wacker
Silicon Oil AR200		Wacker
Silicone 200/100	Dimethicone	DowCorn
Silkall 100	Silk powder	Polyest
Silkpro	Hydrolyzed silk	Polyest
Silsoft A-843		NatStar
Silwet L-7657	Dimethicone copolyol	Witco
Sipon ES-2	Sodium lauryl ether sulfate	
SM2101 Silicone	35% emulsion of a non-reactive aminofunctional silicone fluid	GESil
SM2115 Silicone	Amine functional silicone micro- emulsion	GESil
SM2169 Silicone	60% emulsion of a 60,000 cst dimethicone fluid	GESil
SM2658 Silicone Emulsion	Cationic emulsion of an amine functional polymer	GESil

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
SM2725 Silicone Emulsion	Dimethiconol & sodium dodecylbenzenesulfonate	GESil
SM2765 Silicone Emulsion	Dimethiconol & sodium dodecylbenzenesulfonate	GESil
Snow Petrolatum		Penreco
Sodium Bicarbonate, Grade 3		Church&
Sodium Carboxymethylcellulose, Type 7H4F		Aqualon
Softigen 701	Glyceryl ricinoleate	Huls
Softigen 710		Huls
Softigen 767	PEG-6 caprylic/capric triglycerides	Huls
Softisan Gel	Complex of chemicals	Huls
Softisan 100	Hydrogenated cocoglycerides	Huls
Softisan 378	Caprylic/capric/stearic triglyceride	Huls
Softisan 601	Glyceryl cocoate & hydrogenated coconut oil & ceteareth-25	Huls
Softisan 645 & 649	Bis-diglyceryl polyacyladipate-2	Huls
Solan 50	PEG-60 lanolin	Croda
Solimate "E"		UnitedG
Solubilizer S12	Nonoxynol-14	Givauda
Solulan C-24		Amercho
Solulan 16		Amercho
Solulan 75		Amercho
Solulan 98	Polysorbate 80, cetyl acetate, acetylated lanolin alcohol	Amercho
Solvent ID	Isododecane	
Sorbitan Palmitate		Connock

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Sorbitol F Liquid		
Span 60	Surfactants	ICI
Span 80	Surfactants	ICI
Spearmint Oil RM-110		
Spectraveil IPM	Zinc oxide & isopropyl myristate	Dempsey
Spectraveil TG 40% Dispersion		Dempsey
Spermaceti Substitute #573 Cetyl Esters		
SPM Wax	Cetyl esters	Robeco
Squalane		Robeco
SR1000 Silicone Resin	Trimethylsiloxysilicate	GESil
SR4230 Silicone Resin	Cyclopentasiloxane & Trimethylsiloxysilicate	GESil
SS4267 Silicone Resin	Dimethicone & trimethylsiloxysilicate	GESil
Stabileze 06/QM		ISP
Standamox	Amine oxide	Henkel
Standapol A & EA-1	Alkyl ether sulfate/alkyl sulfate	Henkel
Stearic Acid No. 63-0412		Ross
Stearyl alcohol & cetareth-20		Lanaete
Stepanol AEG	Ammonium lauryl sulfate &.....	Stepan
Stepanol AM-V	Ammonium lauryl sulfate (30%)	Stepan
Stepanol WA Paste	Sodium lauryl sulfate	Stepan
Stepanol WA-100	Sodium lauryl sulfate	Stepan
Sucrose Distearate		Croda
Sulfochem ALS & AOS	Alkyl sulfate/alkyl ether sulfate	Chemron
& B-209 & B-2090P & DLS & EA-2 & ES-2 & ES-3 & MG & MG-LC & SBS & SLS & SLX & TD-3 & TLS		

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Sunflower Seed Oil		Polyest
Super Hartolan	Lanolin alcohol	Croda
Super Refined Wheat Germ Oil		Croda
Super Sterol Ester		Croda
Suttocide A	Neutralizer/preservative	ISPSutt
Sylodent D767 & 15 & 15X & 750 & 753 & 756		Davison
Talc 141 BC		Whittak
Talc 1629		Whittak
Teginacid	Glyceryl stearate & cetareth-20	Golds
Teginacid H	Glyceryl stearate & ceteth-20	Golds
Tegin M	Glyceryl stearate	Golds
Tegin P		Golds
Tego-Betaine F	Cocamidopropyl betaine	Golds
Tego Care 450	Polyglyceryl-3 methylglucose distearate	Golds
Tego-Glucoside L55	Lauryl glucoside, steareth-25, ceteth-20	Golds
Tego-Pearl N100	Glycol distearate, steareth-4	Golds
Tenox 2 & 6	Antioxidants	Eastman
Tensine	Wheat protein/Film former	
Texapon K14S70 Spec & K14S Spec	Sodium myreth sulfate	Henkel
Texapon NSO & N40 & N70	Sodium laureth sulfate	Henkel
Texapon SB3F & SB3KC	Disodium laureth sulfosuccinate	Henkel
Thixotrate		UnitedG

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Timica Golden Bronze	Mica & iron oxides & titanium dioxide	Mearl
Timica Gold Sparkle	Mica & titanium dioxide & iron oxides	Mearl
Timiron MP-1001	Mica & titanium dioxide	Rona
Tioveil AQN		Dempsey
Tioveil AQ-G	Water & titanium dioxide	Dempsey
Tioveil FIN		Dempsey
Tioveil IPM	Titanium dioxide & isopropyl myristate	Dempsey
Tioveil MOTG	Titanium dioxide & mineral oil & caprylic/capric triglyceride	Dempsey
Tioveil OP	Titanium dioxide & octyl palmitate	Dempsey
Tioveil TG	Titanium dioxide & caprylic capric triglyceride	Dempsey
Titanium Dioxide UH 0082		
Titanium Dioxide 328 & 3328		Whittak
TiO2 Sperse BG		Collab
T-Maz 20	Polysorbate 20	PPG
Tocopherol Acetate		Hoffman
Tospearl 120A, 130A, 145A, 2000 Fine Particle	Polymethylsilsesquioxane Silicone Resins	GESil
Transcutol		
Trimarin 61636	Perfume	
Tris(hydroxymethyl)-aminomethane:	Tromethamine	Merck
Tritiplex III	Disodium EDTA	
Tween 60	Polysorbate 60	ICI
Tween 80	Polysorbate 80	ICI

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Tween 85	Polysorbate 85	ICI
Tylose H4000P & H1000 & H100000yp	Hydroxyethylcellulose	Hoechst
Ucare Polymer JR-30M & JR-400 & LR-30M & LR-400	Polyquaternium-10	UnionCa
Ultima Petrolatum	Petrolatum	
Ultrapure L	Petrolatum White USP	Ultra
Ultra Talc #4006		Ultra
Ultrez 10		
Unicerin C-30		Induc
Unicide U-13	Imidazolidinyl urea	Induc
Unimoist U-125		Induch
Uninontan U-34		
Unipabol U-17	PEG-25 PABA	
Uniphen P-23	Preservative	Induc
Unipherol U-14		Induc
Unispheres YE-501 Yellow		Induc
Unistab S-69	Farnesol & linalool	UnCarb
Unitrienol T-27	Farnesyl acetate & farnesol & panthenyl triacetate	Induc
Unitwix		UnitedG
Uvinul O-18	Octyl salicylate	BASF
Varisoft CRC	Cetearyl alcohol & dicetyldim- onium chloride & stearamido- propyl dimethylamine	Witco
Veegum & HR & HV & Regular & Ultra	Magnesium aluminum silicate	Vander

RAW MATERIALS	CHEMICAL DESCRIPTION	SOURCE
Viscarin SD389 & TP389	Carrageenan	FMC
Viscasil 60M	Dimethicone	GESil
Vitamin A Palmitate	Retinyl palmitate	
Vitamin A Palmitate Type PIMO/BH	Corn oil & retinyl palmitate	
Vitamin E Acetate	Tocopheryl acetate	
Vitamin E Linoleate	DL-alpha-tocopherol linoleate	Bleakle
Volatile Silicone VS-7158 or VS-1758		Witco
Volpo 20	Oleth-20	Croda
Wacker-Belsil CM040	Cyclomethicone	Wacker
Wacker-Belsil DM100	Dimethicone	Wacker
Wacker-Belsil DM350	Dimethicone	Wacker
Wacker-Belsil DMC6038	Dimethicone copolyol	Wacker
Wacker-Belsil SDM6022	Stearoxy dimethicone, dimethicone	Wacker
Wacker-Belsil TMS 3069 VP	Dimethicone, trimethylsiloxysilicate	Wacker
Wacker Emulsion E32	Stearoxy methicone, trideceth-10	Wacker
Wacker HDK H15	Silica dimethyl silylate	Wacker
Walnut Shell Powder		Connock
White Beeswax	Beeswax	
White Ozokerite 77W	Ozokerite	
Witcamide 511	Alkanolamide surfactant	Witco
Witconol 14	Polyglyceryl-4 oleate	Witco
Witco White Petrolatum		Witco
Witepsol H15	Hard fat, DAB10	Huls

Section XIV

Suppliers' Addresses

Active Organics Inc.
11230 Grader St.
Dallas, TX 75238
(214)-348-2015/(800)-541-1478

Ajinomoto USA, Inc.
500 Frank W. Burr Blvd.
Glenpointe Centre West
Teaneck, NJ 07666
(201)-488-1212

Akzo Chemicals/Akzo Nobel
300 South Riverside Plaza
Chicago, IL 60606
(312)-906-7500

Alpine Aromatics International
51 Ethel Rd West
Piscataway, NJ 08854
(732)-572-5600/(800)-631-5389

Amerchol Corp.
P.O. Box 4051
136 Talmadge Rd.
Edison, NJ 08818
(908)-248-6000

Amoco Chemicals
200 E. Randolph Dr
Chicago, IL 60601
(630)-434-6200/(800)-621-4567

Angus Chemical Co.
1500 E. Lake Cook Rd.
Buffalo Grove, IL 60089
(847)-215-8600/(800)-362-2580

Aqualon Division
Hercules Inc.
1313 N. Market St.
Wilmington, DE 19894
(302)-594-5000

Ausimont USA, Inc.
10 Leonards Lane
Thorofare, NJ 08086
(609)-853-8119/(800)-323-AUSI

BASF Corp.
3000 Continental Drive North
Mount Olive, NJ 07828
(201)-426-2800/(800)-669-2273

Bell Flavors & Fragrances Inc.
500 Academy Dr.
Northbrook, IL 60062
(847)-291-8300

Cabot Corp.
700 E. US Hwy 36
Tuscola, IL 61953
(217)-253-3370/(800)-222-6745

Calgon Corp.
P.O. Box 1346
Pittsburgh, PA 15230
(412)-777-8000

Chemron Corp.
P.O. Box 2299
Paso Robles, CA 93447
(805)-239-1550

Church & Dwight Co., Inc.
469 N. Harrison St.
Princeton, NJ 08543
(609)-497-7113/(800)-221-0453

Ciba Specialty Chemicals Corp.
4000 Premier Drive
High Point, NC 27265
(910)-801-2000/(888)-396-2422

Condea Vista Co.
112 Third Ave.
Westwood, NJ 07675
(732)-560-6800

A&E Connock Ltd
Fordingsbridge,
Hunts, UK

Croda Inc.
7 Century Drive
Parsippany, NJ 07054
(201)-644-4900

Degussa Corp.
65 Challenger Rd.
Ridgefield Park, NJ 07660
(201)-641-6100

Frank E. Dempsey & Sons Ltd.
47 Davies Ave.
Toronto, Ontario M4M 2A9
(416)-461-0844

Dow Chemical Co.
Midland, MI 49674
(800)-447-4369

Dow Corning Corp.
Box 0994
Midland, MI 48686
(517)-496-6000

Dragoco Inc.
10 Gordon Drive
Totowa, NJ 07512
(201)-256-3850

Drom International Inc.
5 Jacksonville Rd.
P.O. Box 5
Towaco, NJ 07082
(201)-316-8400

duPont Co.
1007 Market St.
Wilmington, DE 19898
(800)-441-7515

Eastman Chemical Co.
P.O. Box 431
Kingsport, TN 37662
(423)-229-2000/(800)-EASTMAN

ECC International
5775 Peachtree-Dunwoody Rd.
Atlanta, GA 30342
(404)-843-1551/(800)-843-3222

Exxon Chemical Co.
13501 Katy Freeway
Houston, TX 77079
(281)-870-6000/(800)-231-6633

Fanning Corp.
2450 W. Hubbard St.
Chicago, IL 60612
(312)-563-1234

Finetex Inc.
418 Falmouth Ave.
Elmwood Park, NJ 07407
(201)-797-4686

FMC Corp.
Chemical Products Group
1735 Market St.
Philadelphia, PA 19103
(215)-299-6000

H.B. Fuller Co.
3530 N. Lexington Ave. North
St. Paul, MN 55126
(612)-481-1588/(800)-468-6358

GE Silicones
260 Hudson River Rd.
Waterford, NY 12188
(518)-237-3330/(800)-255-8886

Gattefosse Corp.
189 Kinderkamack Rd.
Westwood, NJ 07675
(201)-573-1700

Giulini Corp.
30 Highridge Rd.
New Rochelle, NY 10804
(914)-636-0096

Givaudan-Roure Corp.
100 Delawanna Ave.
Clifton, NJ 07015
(201)-365-8000

Goldschmidt Chemical Corp.
P.O. Box 1299
914 E. Randolph Rd.
Hopewell, VA 23860
(804)-541-8658/(800)-446-1809

- BF Goodrich Specialty Chemicals International Specialty Products
 9911 Brecksville Rd. 1361 Alps Rd.
 Brecksville, OH 44141 Wayne, NJ 07470
 (216)-447-5000/(800)-331-1144 (201)-628-4000
- Grain Processing Corp. Jarchem Industries, Inc.
 1600 Oregon St. 414 Wilson Ave.
 Muscatine, IA 52761 Newark, NJ 07105
 (319)-264-4265 (973)-344-0600
- Haarman & Reimer Corp. Koster Keunen Inc.
 60 Diamond Rd. P.O. Box 447
 Springfield, NJ 07091 90 Bourne Blvd.
 (201)-912-5707/(800)-432-1559 Sayville, NY 11782
 (516)-589-0456
- Hampshire Chemical Corp. Lanaetex Products Inc.
 55 Hayden Ave. 151 3 Ave.
 Lexington, MA 02173 Elizabeth, NJ 07206
 (617)-861-9700 (908)-351-9700
- Henkel Corp. Lipo Chemicals Inc.
 2400 Renaissance Blvd. 207 19th Ave.
 Gulph Mills, PA 19406 Paterson, NJ 07504
 (610)-270-8100 (201)-345-8600
- Hoechst Celanese Corp. Lonza Inc.
 5200 77 Center Drive 1717 Rte 208
 P.O. Box 1026 Fair Lawn, NJ 07410
 Charlotte, NC 28201 (201)-794-2400/(800)-777-1875
 (704)-559-6136/(800)-365-2436
- Hoffman-LaRoche Inc. Madis Botanicals Inc.
 340 Kingsland St. 375 Huyler St.
 Nutley, NJ 07110 South Hackensack, NJ 07606
 (201)-235-8080/(800)-526-0189 (201)-440-5000
- Huls AG McIntyre Group Ltd
 D-45764 Marl, Germany 1000 Governors Hwy
 010-49-2365-490 University Park, IL 60466
 (708)-534-6200/(800)-645-6457
- ICI Surfactants Mearl Corp.
 3411 Silverdale Rd. P.O. Box 3030
 P.O. Box 15391 320 Old Briarcliff Rd.
 Wilmington, DE 19850 Briarcliff Manor, NY 10510
 (302)-887-3000/(800)-822-8215 (914)-923-8500
- Induchem AG E. Merck
 Industriestraße 26, Darmstadt, Germany
 CH-8604 Volketswil, Switzerland

Mona Industries Inc.
76 E 24 St.
P.O. Box 425
Paterson, NJ 07544
(201)-345-8220/(800)-553-6662

Morflex Inc.
2110 High Point Rd
Greensboro, NC 27403
(910)-292-1781

National Starch & Chemical Co.
10 FINDERNE AVE.
BRIDGEWATER, NJ 08807
(908)-685-5000/(800)-797-4992

Nipa Hardwicke Inc.
3411 Silverside Rd
Wilmington, DE 19810
(302)-478-1522

NutraSweet Kelco Co.
Unit of Monsanto Co.
8355 Aero Drive
San Diego, CA 92123
(619)-292-4900/(800)-535-2656

Penreco
138 Petrolia St.
Karns City, PA 16041
(412)-756-0110/(800)-245-3952

Pentapharm Ltd.
Engelgasse 109, P.O. Box
Basel, Switzerland

Polyester Corp.
61 Hill St.
P.O. Drawer 5076
Southampton, NY 11969
(516)-283-4400

PPG Industries
3938 Porett Drive
Gurnee, IL 60031
(847)-244-3410/(800)-323-0856

Presperse Inc.
601 Hadley Rd.
P.O. Box 735
South Plainfield, NJ 07080
(908)-756-2023

Protameen Chemicals Inc.
375 Minnisink Rd.
Totowa, NJ 07511
(201)-256-4374

Purac America Inc.
111 Barclay Blvd.
Lincolnshire, IL 60069
(847)-634-6330

Rheox Inc.
P.O. Box 700
Hightstown, NJ 08520
(609)-443-2500

Rhone-Poulenc Inc.
Cranbury, NJ 08512
(609)-860-4000

Dr. K. Richter GmbH
Chemisches Laboratorium
Bennigstrabe 25,
D-1000 Berlin

R.I.T.A. Corp.
1725 Kilkenny
Woodstock, IL 60098
(815)-337-2500/(800)-426-7759

Robeco Inc.
99 Park Ave.
New York, NY 10016
(212)-986-6410

Robertet-Novarome Inc.
30 Stewart Place
Fairfield, NJ 07004
(201)-575-4550

Rohm & Haas Co.
Independence Mall West
Philadelphia, PA 19106
(800)-922-8596

Rona/EM Industries
5 Skyline Drive
Hawthorne, NY 10532
(914)-592-4660

Frank B. Ross Co. Inc.
P.O. Box 4085
Jersey City, NJ 07304
(201)-433-4512

Scher Chemicals Inc.
Industrial W cor Styretowne Rd
P.O. Box 4317
Clifton, NJ 07012
(201)-471-1300

Seppic, Inc.
Atrium at Fairfield
Fairfield, NJ 07004
(201)-882-5597

Shaw Mudge Co.
P.O. Box 2279
Shelton, CT 06484
(203)-925-5000

Stepan Co.
22 W. Frontage Rd
Northfield, IL 60093
(847)-446-7500/(800)-745-7837

Strahl & Pitsch, Inc.
230 Great E Neck Rd
W. Babylon, NY 11704
(516)-587-9000

Terry Laboratories Inc.
390 N. Wickham Rd
Melbourne, FL 32935
(407)-259-1630/(800)-367-2563

3V Inc.
1500 Harbor Blvd.
Weehawken, NJ 07087
(201)-865-3600/(800)-441-5156

Tioxide Specialties Ltd.
Billingham, Cleveland TS23 1PS,
United Kingdom
0642-370300

Ultra Chemical Inc.
130 Maple Ave.
Red Bank, NJ 07701
(908)-224-0200

Unichema North America
4650 S Racine Ave
Chicago, IL 60609
(312)-376-9000/(800)-833-2864

Union Carbide Corp.
39 Old Ridgebury Rd
Danbury, CT 06817
(203)-794-2000/(800)-335-8550

United-Guardian
230 Marcus Blvd
P.O. Box 18050
Hauppauge, NY 11788

R.T. Vanderbilt Co. Inc.
30 Winfield St.
P.O. Box 5150
Norwalk, CT 06856
(203)-853-1400/(800)-243-6064

Wacker-Chemie GmbH
Hanns-Seidel-Platz 4
81737 Munchen, Germany
089-6279-01

Wacker Silicones Corp.
3301 Sutton Rd.
Adrian, MI 49221
(517)-264-8500/(800)-248-0063

Whittaker, Clark & Daniels Inc.
1000 Coolidge St.
South Plainfield, NJ 07080
(908)-561-6100/(800)-732-0562

Witco Corp. (All Groups)
One American Lane
Greenwich, CT 06831
(800)-494-8287

Witco Corp.
5777 Frantz Rd. - P.O. Box 646
Dublin, OH 43017
(614)-765-6500/(800)-366-6500

Zschimmer & Schwarz
P.O. Box 2179
D-5420 Lahnstein,
West Germany